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**South Dakota Department of Health
Center for Health Policy and Statistics**

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Center for Health Policy and Statistics**

SOUTH DAKOTA VITAL STATISTIC AND HEALTH STATUS: 1989

Department of Health
Charles A. Anderson, Ed.D.
Secretary

Pierre, South Dakota
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PREFACE

Vital Statistics and Health Status: 1989 was prepared by the Center for Health Policy and Statistics, South Dakota Department of Health.

This report is divided into six main sections: Births, Infant Mortality, Mortality, Induced Abortions, Marriages and Divorces and Communicable Diseases. Each section contains written analysis plus tables and figures. There is also a technical notes section which provides additional information regarding the source of data, data delimitations, geographic allocation, and definitions. The birth and death information with Unknown race was prorated among the known races, due to the relative small number of incidents.

Any questions concerning the data, or request for additional statistics, may be directed to the following agency within the South Dakota Department of Health:

Center For Health Policy and Statistics
523 East Capitol
Pierre, South Dakota 57501-3182
Phone: (605) 773-3693 or (605) 773-4961

For specific information or questions on Communicable Disease contact:

Communicable Disease
523 East Capitol
Pierre, South Dakota 57501-3182
Phone: (605) 773-3364

The following Health Department personnel were the main contributors to the development of this report:

Leah Rasmussen	Word Processing
Doris Donner	State Registrar
Tammy Holmes	Senior Programmer Analyst
Everett Putnam	Statistician
David Peterson	Health Research Analyst
Linda Schaefer	Public Health Advisor

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Live Births

South Dakota Live Births
An Overview: 1989

Total Resident Live Births	11,072
Crude Birth Rate per 1,000 Population	15.5
Median Live Birth Weight (Grams)	3,429
Low Weight Births (Less than 2,500 grams)	594
Low Birth Weight Rate per 1,000 Live Births	53.6
Mean Age of Mother	26
No Prenatal Care (Percentage of Total Births)	1.2

South Dakota Resident Births

South Dakota resident births numbered 11,072 in 1989, for a crude birth rate of 15.5 per 1,000 South Dakota resident population. Resident births decreased by 1 percent from 1988 when there were 11,185 births. This was the lowest birth rate South Dakota had experienced in the thirty years of data provided in table 1. This table also provides the United States births and birth rates per 1,000 population from 1960-1989.

In 1989, 51.6 percent of the babies born were male, and 48.4 percent were female. Racially the percentages were: White - 51.9 percent male, 48.1 percent female; Native American - 50.4 percent male, 49.6 percent female; and Other races - 51.3 percent male, 48.7 percent female.

The low birth weight rate per 1,000 live births increased to 53.6 in 1989 from 46.8 during 1988. This was a 14.5 percent increase over the 1988 low birth weight rate.

Physicians attended 95.2 percent of the births in South Dakota in 1989. While midwives (Certified nurse and other) attended 4.3 percent of the births. Last year in South Dakota, 95.2 percent and 4.1 percent of the births were attended by physicians and midwives respectively.

Table 1

Resident Live Births and Crude Birth Rates
South Dakota and United States
1960-1989

Year	U.S. Births		S.D. Births	
	Number	Crude Rate	Number	Crude Rate
*1989	4,021,000	16.2	11,072	15.5
*1988	3,913,000	15.9	11,182	15.7
1987	3,809,394	15.7	11,482	16.2
1986	3,756,547	15.6	11,623	16.4
1985	3,760,561	15.7	12,129	17.2
1984	3,669,141	15.7	12,431	17.8
1983	3,638,933	15.6	12,521	18.0
1982	3,680,537	15.9	12,839	18.6
1981	3,629,238	15.8	12,725	18.4
1980	3,612,258	15.9	13,256	19.2
1979	3,494,398	15.5	12,973	18.8
1978	3,494,398	15.0	12,203	17.6
1977	3,333,279	15.1	12,069	17.6
1976	3,326,632	14.5	11,655	17.0
1975	3,144,198	14.6	11,294	16.6
1974	3,159,958	14.8	11,174	16.4
1973	3,136,965	14.8	10,706	15.7
1972	3,258,411	15.2	10,855	16.0
1971	3,555,972	17.1	11,634	17.3
1970	3,731,386	18.2	11,717	17.6
1969	3,600,206	17.8	11,441	17.1
1968	3,501,564	17.5	11,708	17.1
1967	3,520,959	17.8	11,424	17.0
1966	3,606,274	18.4	12,534	18.4
1965	3,760,358	19.4	13,692	19.8
1964	4,027,490	21.0	15,627	22.3
1963	4,098,020	21.7	16,711	23.6
1962	4,126,362	22.4	17,158	24.3
1961	4,268,326	23.2	17,551	25.3
1960	4,257,850	23.7	17,594	25.8

*U.S. data are provisional

Source: National Center for Health Statistics, Hyattsville, Maryland 20782 and Center for Health Policy and Statistics, South Dakota Department of Health.

Figure 1
Resident Live Birth Rates
South Dakota and United States
1960 - 1989

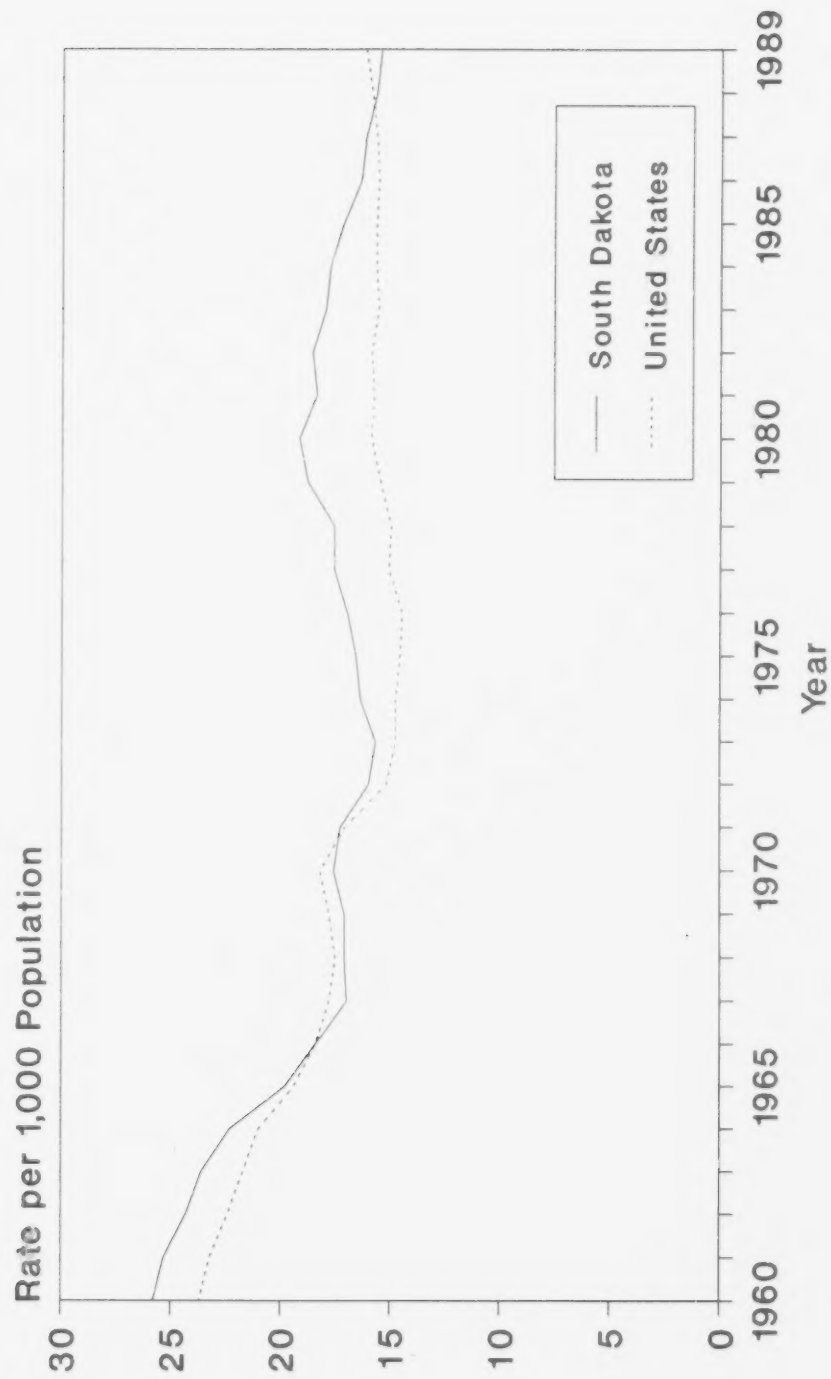


Table 2

Births Occurring in South Dakota by Mother's State of Residence and
South Dakota Resident Births by State of Occurrence, 1989

	Births in South Dakota by Mothers' Resident State				South Dakota Resident Births by State of Occurrence			
	Total	White	Native American	Other	Total	White	Native American	Other
Total	11,108	9,295	1,659	154	11,072	9,163	1,753	156
Alabama	.	.	.	.	1	1	.	.
Arizona	1	.	1	.	.	.	.	.
California	1	1	.	.	1	1	.	.
Colorado	1	1	.	.	17	14	3	.
Georgia	1	1	.	.	.	.	.	.
Illinois	1	1	.	.	.	1	.	.
Iowa	110	109	.	1	97	94	2	1
Kentucky	.	.	.	.	1	.	1	.
Louisiana	1	1	.	.	.	.	.	.
Maryland	.	.	.	.	2	2	.	.
Michigan	1	1	.	.	.	.	.	.
Minnesota	123	118	5	.	110	109	1	.
Mississippi	.	.	.	.	1	1	.	.
Missouri	.	.	.	.	2	.	.	2
Montana	18	18	.	.	1	.	1	.
Nebraska	212	185	27	.	114	51	63	.
Nevada	1	1	.	.	.	.	.	.
New Mexico	.	.	.	.	1	1	.	.
New York	2	2	.	.	1	1	.	.
North Dakota	31	27	4	.	164	101	63	.
South Dakota	10,553	8,782	1,618	153	10,553	8,782	1,618	153
Texas	2	2	.	.	1	1	.	.
Utah	1	.	1	.	.	.	.	.
Virginia	.	.	.	.	1	1	.	.
Wisconsin	2	2	.	.	1	1	.	.
Wyoming	45	43	2	.	3	2	1	.
Foreign Country	1	.	1	.	.	.	.	.

Source: Center for Health Policy and Statistics, South Dakota Department of Health.

Resident Births and South Dakota Occurrence Births

Of the 11,072 South Dakota resident births in 1989, 519 occurred out of state, and of the 11,108 births occurring in South Dakota in 1989, 555 were not South Dakota residents.

Table 3

South Dakota Resident Live Births by Mother's Race
1980-1989

Year	Births	White		Native American		Other	
	Number	Number	% of all Births	Number	% of all Births	Number	% of all Births
1989	11,072	9,163	82.8	1,753	15.8	156	1.4
1988	11,185	9,343	83.5	1,696	15.2	146	1.3
1987	11,482	9,642	84.0	1,695	14.8	145	1.3
1986	11,623	9,807	84.4	1,678	14.4	138	1.2
1985	12,129	10,301	84.9	1,689	13.9	139	1.1
1984	12,431	10,670	85.8	1,637	13.2	124	1.0
1983	12,521	10,711	85.5	1,690	13.5	120	1.0
1982	12,839	11,095	86.4	1,624	12.6	120	0.9
1981	12,725	11,055	86.9	1,538	12.1	132	1.0
1980	13,256	11,535	87.0	1,593	12.0	128	1.0

Source: Center for Health Policy and Statistics, South Dakota Department of Health.

Births by Race

The racial composition of South Dakota resident live births has been changing over the last decade. While the total number of births are declining, Native American births are increasing. The percentage of births that are Native American has increased from 12.0 in 1980 to 15.8 in 1989. Total births declined by 20.6 percent since 1980, while Native American births increased from 1,593 in 1980 to 1,753 in 1989, a 10.0 percent increase.

Table 4

South Dakota Resident Live Births by Birth Weight
and Mother's Race, 1989

Weight (In Grams)	Total		Race					
			White		Native American		Other	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
0-499	11	0.1	7	0.1	4	0.2	0	0.0
500-999	39	0.4	31	0.3	5	0.4	2	1.3
1,000-1,499	42	0.4	34	0.4	6	0.4	2	1.3
1,500-1,999	103	0.9	81	0.9	21	1.2	1	0.6
2,000-2,499	399	3.6	314	3.4	76	4.3	9	5.8
2,500-2,999	1,432	12.9	1,194	13.0	209	11.9	29	18.6
3,000-3,499	3,918	35.4	3,264	35.6	593	33.8	61	39.1
3,500-3,999	3,594	32.5	2,963	32.3	589	33.6	42	26.9
4,000-4,499	1,291	11.6	1,078	11.8	204	11.6	10	6.4
4,500-4,999	219	2.0	180	2.0	38	2.2	0	0.0
5,000 & Over	24	0.2	17	0.2	7	0.4	0	0.0
Total	11,072	100.0	9,163	100.0	1,753	100.0	156	100.0
Median	3,458		3,458		3,486		3,292	
Mean	3,429		3,432		3,435		3,221	
Mode	3,402		3,402		3,402		3,542	

Source: Center for Health Policy and Statistics, South Dakota Department of Health.

Birth Weight

Distribution of birth weight by race shows little variation between the white and the Native American race. Just over 5 percent of the white births were low birth weight while 6.5 percent of the Native American births were low birth weight.

The largest percentage of births was in the 3,000 - 3,499 gram category as was the case last year. The second largest group was the 3,500 - 3,999 gram group which was also the same last year. This year there were 594 low birth weight births (less than 2,500 grams) or 5.4 percent of all live births. This is up from 1988 when the percent of low birth weight babies was 4.7 percent of total live births.

Table 5
South Dakota Resident Live Births by Age and Mother's Race
1989

Age of Mother	Race							
	Total		White		Native American		Other	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Less than 15	5	0.0	3	0.0	2	0.1	0	0.0
15-19 Years	1,232	11.1	803	8.8	418	23.9	11	7.1
20-24 Years	3,005	27.1	2,399	26.2	555	31.6	51	32.7
25-29 Years	3,777	34.1	3,282	35.8	442	25.2	53	34.0
30-34 Years	2,249	20.3	1,990	21.7	226	12.9	33	21.2
35-39 Years	706	6.4	608	6.6	91	5.2	7	4.5
40-44 Years	93	0.8	74	0.8	18	1.0	1	0.6
45-49 Years	5	0.0	4	0.0	1	0.1	0	0.0
Total	11,072	100.0	9,163	100.0	1,753	100.0	156	100.0
Median Age	26		27		24		26	
Mean Age	26		27		24		26	
Mode Age	27		27		18		26	

Source: Center for Health Policy and Statistics, South Dakota Department of Health.

Mother's Age and Race

Women in the 25-29 years of age cohort accounted for over one third of the South Dakota resident births in 1989, 34.1 percent. Women less than 25 years of age comprised about 38 percent of the total live resident births. This does not hold true when the resident births are viewed racially. The median age of mother for the three races, white, Native American and Other were 27, 24, and 26 years of age respectively. The modal age of mother for the three races, white, Native American and Other were 27, 24, and 26 years of age respectively. This table shows that young mothers constitute a larger percentage of the Native American mothers than they do for the white or other races in South Dakota.

Table 6

South Dakota Resident Single Live Births by Mother's Age and Race
and Trimester Prenatal Care Began, 1989

Trimester Prenatal Care Began	Race							
	All Races		White		Native American		Other	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
First	8,403	77.5	7,323	81.6	980	57.0	100	64.9
Second	1,842	17.0	1,361	15.2	436	25.3	45	29.2
Third	407	3.7	205	2.3	197	11.5	5	3.2
None	126	1.2	43	0.5	82	4.8	1	0.7
Not Stated	66	0.6	38	0.4	25	1.4	3	2.0
Total	10,844	100.0	8,970	100.0	1,720	100.0	154	100.0

Source: Center for Health Policy and Statistics, South Dakota Department of Health.

Prenatal Care

Almost 78 percent of the mothers initiated care in the first trimester. Just over one percent did not obtain prenatal care. White women initiated care earlier than Native American women and women from other races. Only 57 percent of Native American mothers initiated care in the first trimester, also, almost 5 percent of the Native American mothers, did not obtain adequate care.

As table 7 indicates, almost 15 percent of the pregnancies resulting in low birth weight babies (less than 2,500 grams) had fewer than five prenatal care visits. Thirty-five percent of the Native American low birth weight births had fewer than 5 prenatal care visits.

Table 7

South Dakota Resident Single Live Births by Mother's Race and Number of Prenatal
Visits for Low Birth Weight Babies, 1989

Number of Prenatal Care Visits	Race							
	All Races		White		Native American		Other	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
None	19	3.9	11	2.9	8	8.2	0	0.0
1-4	53	10.8	25	6.5	26	26.8	2	16.7
5-9	191	38.7	150	39.1	38	39.2	3	25.0
10-14	178	36.1	157	40.9	15	15.5	6	50.0
15-19	26	5.3	23	6.0	3	3.1	0	0.0
20 & +	13	2.6	12	3.1	1	1.0	0	0.0
Unknown	13	2.6	6	1.5	6	6.2	1	8.3
Total	493	100.0	384	100.0	97	100.0	12	100.0

Source: Center for Health Policy and Statistics, South Dakota Department of Health.

TABLE 8

SOUTH DAKOTA RESIDENT BIRTHS WITH REPORTED CONGENITAL ANOMALIES,
BY SEX AND MOTHER'S RACE, 1989

	TOTAL	MOTHER'S RACE					
		WHITE		NATIVE AMERICAN		OTHER	
		BABY'S SEX		BABY'S SEX		BABY'S SEX	
		FEMALE	MALE	FEMALE	MALE	FEMALE	MALE
TOTAL CONGENITAL ANOMALIES	296	84	158	27	20	4	3
ANENCEPHALUS	1	1	-	-	-	-	-
SPINA BIFIDA/MENINGOCELE	3	1	1	1	-	-	-
HYDROCEPHALUS	1	1	-	-	-	-	-
MICROCEPHALUS	4	-	3	1	-	-	-
OTHER CENTRAL NERVOUS SYSTEM ANOMALIES	6	1	-	3	2	-	-
HEART MALFORMATIONS	31	8	18	1	3	1	-
OTHER CIRCULATORY/RESPIRATORY ANOMALIES	23	7	12	1	3	-	-
RECTAL ATRESIA/STENOSIS	3	-	3	-	-	-	-
TRACHEO-ESOPHAGEAL FISTULA/ATRESIA	2	-	2	-	-	-	-
OMPHALOCELE/GASTROSCHISIS	3	2	1	-	-	-	-
OTHER GASTROINTESTINAL ANOMALIES	11	3	5	2	-	1	-
MALFORMED GENITALIA	14	-	12	-	2	-	-
RENAL AGENESIS	3	1	1	1	-	-	-
OTHER UROGENITAL ANOMALIES	25	3	17	-	3	-	2
CLEFT LIP/PALATE	12	3	6	1	2	-	-
POLYDACTYLY/SYNDACTYLY/ADACTYLY	15	5	6	3	1	-	-
CLUB FOOT	12	2	8	2	-	-	-
MUSCULOSKELETAL/INTEGUMENTAL ANOMALIES	35	16	15	2	1	-	1
DOWN'S SYNDROME	8	5	1	1	1	-	-
OTHER CHROMOSOMAL ANOMALIES	2	-	2	-	-	-	-
OTHER	82	25	45	8	2	2	-

Source: Center for Health Policy and Statistics, South Dakota Department of Health.

Infant Mortality

South Dakota Infant Mortality
An Overview: 1989

Infant Deaths		
Number		106
Rate per 1,000 Live Births		9.6
Neonatal Deaths		
Number		51
Rate per 1,000 Live Births		4.6
Postneonatal Deaths		
Number		55
Rate per 1,000 Live Births		5.0
Fetal Deaths		
Number		72
Rate per 1,000 Live Births		6.5

Infant Mortality and Fetal Deaths in South Dakota

During 1989, there were 106 South Dakota resident infant deaths. The infant mortality rate per 1,000 live births was 9.6 compared to last years infant mortality rate of 10.0. This is a decrease of 5.4 percent in the number of infant deaths and a decrease of 4.0 percent in the infant mortality rate from 1988.

The number of neonatal deaths totaled 51 for a rate of 4.6 deaths per 1,000 live births. The number of postneonatal deaths was 55 for a rate of 5.0 deaths per 1,000 live births. The neonatal rate declined since 1988 while the postneonatal rate increased.

Fetal deaths increased from 67 in 1988 to 72 in 1989, this is a 7.5 percent increase in the number of fetal deaths. The fetal death rate per 1,000 live births has increased from 6.0 in 1988 to 6.5 in 1989, this is a 8.3 percent increase in the rate.

Table 9 provides a comparison of infant mortality between the United States and South Dakota. The rates are usually close for both the U.S. and South Dakota. Infant mortality rates have been declining as figure 2 indicates.

Table 9
Resident Infant Deaths and Infant Mortality Rates
South Dakota and United States
1960-1989

Year	U.S. Infant Deaths		S.D. Infant Deaths	
	Number	Mortality Rate	Number	Mortality Rate
*1989	38,900	9.7	106	9.6
*1988	38,610	9.9	112	10.0
1987	38,380	10.1	114	9.9
1986	38,891	10.4	155	13.3
1985	40,030	10.6	118	9.7
1984	39,580	10.8	124	10.0
1983	43,627	11.2	135	10.8
1982	42,401	11.5	131	10.2
1981	43,305	11.9	143	11.2
1980	45,526	12.7	145	10.9
1979	45,665	13.1	146	11.3
1978	45,945	13.8	163	13.4
1977	46,975	14.1	195	16.2
1976	48,265	15.2	199	17.1
1975	50,525	16.1	178	15.8
1974	52,776	16.7	219	19.6
1973	55,581	17.7	196	18.3
1972	60,182	18.5	225	20.7
1971	67,981	19.1	216	18.6
1970	74,667	20.0	228	19.5
1969	75,073	20.9	226	19.8
1968	76,263	21.8	233	20.4
1967	79,028	22.4	252	22.1
1966	85,546	23.7	309	24.6
1965	92,866	24.7	315	23.1
1964	99,783	24.8	350	22.4
1963	103,390	25.2	414	24.8
1962	105,479	25.3	434	25.3
1961	107,956	25.3	409	23.3
1960	110,873	26.0	494	28.1

*U.S. Data are provisional

Source: National Center for Health Statistics, Hyattsville, Maryland 20782 and Center for Health Policy and Statistics, South Dakota Department of Health.

Figure 2
Resident Infant Mortality Rates
South Dakota and United States
1960 - 1989

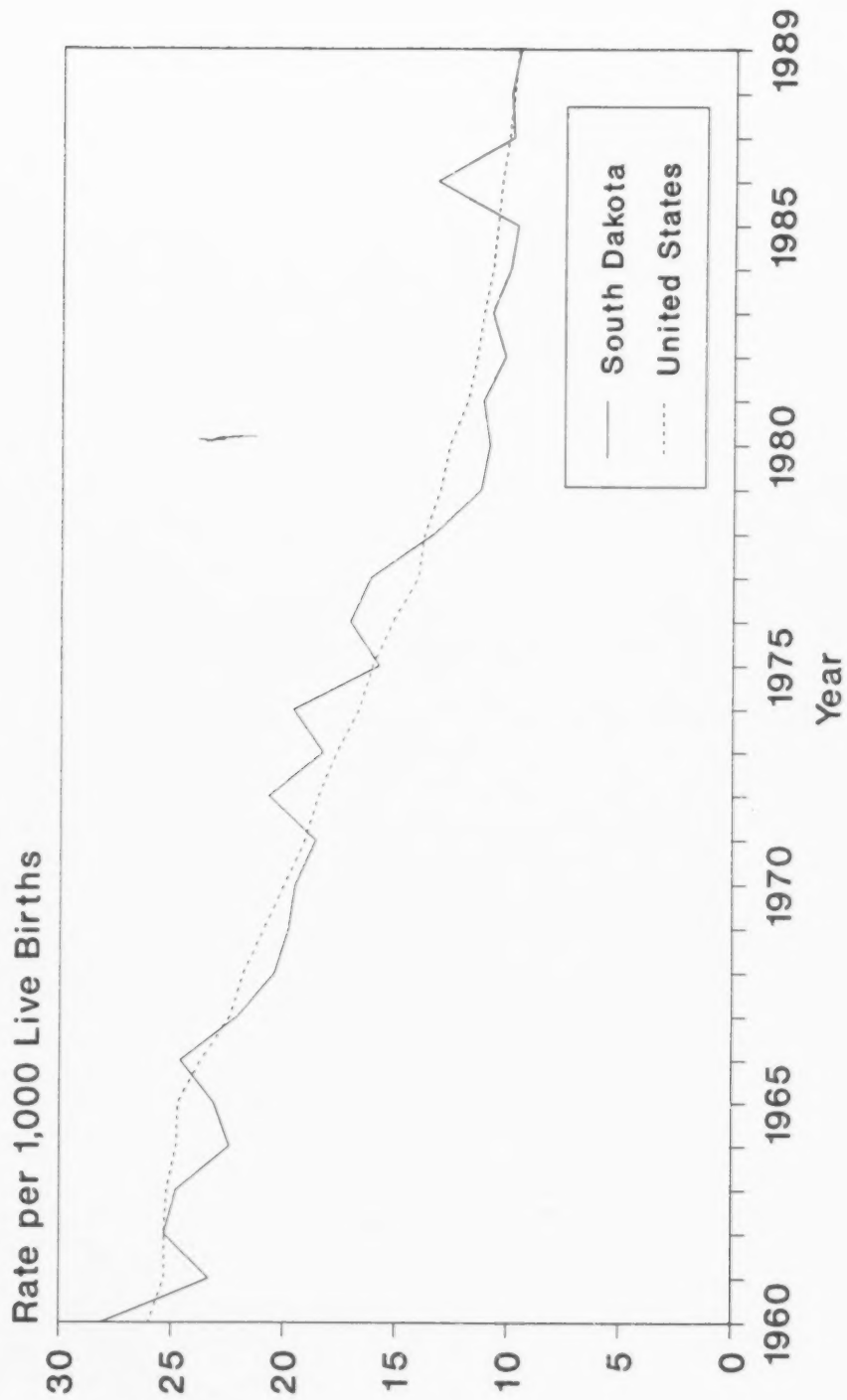


TABLE 10
SOUTH DAKOTA RESIDENT INFANT DEATHS BY AGE AND CAUSE, 1989

	RACE										
	TOTAL	WHITE				NATIVE AMERICAN				OTHER	
		UNDER 1 DAY	1 THRU 6 DAYS	7 THRU 27 DAYS	POST NEONATAL	UNDER 1 DAY	1 THRU 6 DAYS	7 THRU 27 DAYS	POST NEONATAL	7 THRU 27 DAYS	POST NEONATAL
TOTAL	106	18	8	8	30	7	4	5	24	1	1
CAUSES OF DEATH											
SUDDEN INFANT DEATH SYNDROME(798)	31	-	-	1	13	-	-	2	14	-	1
OTHER CONDITIONS IN PERINATAL PERIOD.....(760-764, 766, 769-779)	26	8	4	3	4	1	3	2	-	1	-
CONGENITAL ANOMALIES..(740-759)	21	7	4	2	5	2	-	-	1	-	-
ALL OTHER CAUSES	8	-	-	1	3	-	-	1	3	-	-
SHORT GESTATION & LOW BIRTH WEIGHT.....(765)	7	3	-	-	-	4	-	-	-	-	-
EXTERNAL CAUSES.....(800-999)	6	-	-	-	3	-	-	-	3	-	-
CARDIAC ARREST.....(427.5)	3	-	-	-	2	-	-	-	1	-	-
INTRAUTERINE HYPOXIA & BIRTH ASPHYXIA.....(768)	2	-	-	1	-	-	1	-	-	-	-
PNEUMONIA & INFLUENZA.(480-487)	2	-	-	-	-	-	-	-	2	-	-

NOTE: Numbers following cause of death are I.C.D. 9 codes.

Source: Center for Health Policy and Statistics, South Dakota Department of Health.

Causes of Infant Death

The overall leading cause of infant death was Sudden Infant Death Syndrome, which caused 31 deaths or 29.2 percent of all infant deaths in 1989. Sudden Infant Death Syndrome was the leading cause in Native American infant mortality, accounting for 16 deaths or 40.0 percent of all Native American infant deaths in 1989. Other Conditions in Perinatal Period accounted for 19 white infant deaths or 31.1 percent of the white infant mortality.

Table 10 details cause of deaths for resident infants during 1989.

Table 11
South Dakota Resident Infant Deaths and Mortality Rates
by Mother's Race, 1980-1989

Year	Infant Deaths							
	White Race		Native American		Other Races		All Races	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
1989	64	7.0	40	22.8	2	12.8	106	9.6
1988	87	9.3	25	14.7	0	0.0	112	10.0
1987	76	7.9	36	21.2	2	13.8	114	9.9
1986	100	10.2	52	31.0	3	21.7	155	13.3
1985	89	8.6	29	17.2	0	0.0	118	9.7
1984	94	8.8	28	17.1	2	16.1	124	10.0
1983	88	8.2	46	27.2	1	8.5	135	10.8
1982	91	8.2	37	22.8	3	23.1	131	10.2
1981	108	9.8	33	21.5	2	15.2	143	11.2
1980	103	8.9	42	26.4	0	0.0	145	10.9
80-89	900	8.7	368	22.2	15	11.1	1,283	10.6

Source: Center for Health Policy and Statistics, South Dakota Department of Health.

Table 12

South Dakota Resident Neonatal Deaths and Mortality Rates
by Mother's Race, 1980-1989

Year	Neonatal Deaths							
	White Race		Native American		Other Races		All Races	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
1989	34	3.7	16	9.1	1	6.4	51	4.6
1988	56	6.0	6	3.5	0	0.0	62	5.5
1987	43	4.5	13	7.7	1	6.9	57	5.0
1986	61	6.2	23	13.7	1	7.2	85	7.3
1985	54	5.2	10	5.9	0	0.0	64	5.3
1984	53	5.0	12	7.3	2	16.1	67	5.4
1983	56	5.2	17	10.0	0	0.0	73	5.8
1982	70	6.3	19	11.7	2	15.4	91	7.1
1981	75	6.8	18	11.7	1	7.6	94	7.4
1980	59	5.1	17	10.7	0	0.0	76	5.7
80-89	561	5.4	151	9.1	8	5.9	720	5.9

Source: Center for Health Policy and Statistics, South Dakota Department of Health.

Table 13

South Dakota Resident Postneonatal Deaths and Mortality Rates
by Mother's Race, 1980-1989

Year	Postneonatal Deaths							
	White Race		Native American		Other Races		All Races	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
1989	30	3.3	24	13.7	1	6.4	55	5.0
1988	31	3.3	19	11.2	0	0.0	50	4.5
1987	33	3.4	23	13.5	1	6.9	57	4.9
1986	39	4.0	29	17.3	2	14.5	70	6.0
1985	35	3.4	19	11.3	0	0.0	54	4.4
1984	41	3.8	16	9.8	0	0.0	57	4.6
1983	32	3.0	29	17.2	1	8.5	62	5.0
1982	21	1.9	18	11.1	1	7.7	40	3.1
1981	33	3.0	15	9.8	1	7.6	49	3.8
1980	44	3.8	25	15.7	0	0.0	69	5.2
80-89	339	3.3	217	13.1	7	5.2	563	4.6

Source: Center for Health Policy and Statistics, South Dakota Department of Health.

Table 14

South Dakota Resident Infant Deaths by Birth Weight and Mother's Race, 1989

Infant Deaths	Birth Weight in Grams									
	All Birth Weights	499 or less	500-999	1,000-1,499	1,500-1,999	2,000-2,499	2,500-2,999	3,000-3,499	3,500-3,999	4,000-4,999
Total										
All Races	106	10	15	7	6	11	11	22	22	2
Neonatal										
White	34	6	10	4	3	6	2	1	2	0
Native American	16	3	2	0	1	1	3	3	3	0
Other	1	0	1	0	0	0	0	0	0	0
Total	51	9	13	4	4	7	5	4	5	0
Postneonatal										
White	30	1	2	1	0	4	3	12	7	0
Native American	24	0	0	2	2	0	3	6	9	2
Other	1	0	0	0	0	0	0	0	1	0
Total	55	1	2	3	2	4	6	18	17	2

Source: Center for Health Policy and Statistics, South Dakota Department of Health.

Mortality

South Dakota Mortality
An Overview: 1989

Total South Dakota Resident Deaths	6,534
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Crude Death Rates per 1,000 Population

South Dakota	9.2
United States (Provisional)	8.7

Age-Adjusted Death Rate per 1,000 Population

South Dakota	4.6
United States (Provisional)	5.2

Mortality and Mortality Rates

There were 6,534 South Dakota resident deaths during 1989, compared to 6,567 in 1988, a slight decrease. While the United States provisional crude death rate was 8.7 deaths per 1,000 population during 1989, South Dakota's rate was 9.2 deaths per 1,000 population. When the rates are compared after adjustments have been made for the age distribution of the population of the United States and South Dakota, the United States has about 11.5 percent more deaths per 1,000 population than does South Dakota. This is obtained by comparing the provisional age-adjusted rate for the United States in 1989 of 5.2 deaths per 1,000 population to South Dakota's age-adjusted rate of 4.6 deaths per 1,000 population.

Table 15 provides a comparison of the number of deaths and crude death rate between the United States and South Dakota from 1980-1989. There has been little change in the number of deaths and the rate for South Dakota over the years.

Table 15
Resident Deaths and Crude Death Rates
South Dakota and United States
1960-1989

Year	U.S. Deaths		S.D. Deaths	
	Number	Crude Rate	Number	Crude Rate
*1989	2,155,000	8.7	6,534	9.2
1988	2,167,999	8.8	6,567	9.2
1987	2,123,323	8.7	6,658	9.4
1986	2,105,361	8.7	6,583	9.3
1985	2,086,440	8.7	6,604	9.4
1984	2,039,369	8.6	6,512	9.3
1983	2,019,201	8.6	6,622	9.5
1982	1,974,797	8.5	6,588	9.5
1981	1,977,981	8.6	6,434	9.3
1980	1,989,841	8.8	6,539	9.5
1979	1,913,841	8.5	6,329	9.2
1978	1,927,788	8.7	6,480	9.4
1977	1,899,597	8.6	6,281	9.1
1976	1,909,440	8.8	6,727	9.8
1975	1,892,879	8.8	6,470	9.5
1974	1,934,388	9.0	6,577	9.7
1973	1,973,003	9.3	6,626	9.7
1972	1,963,944	9.4	7,038	10.4
1971	1,927,534	9.3	6,704	9.9
1970	1,921,031	9.5	6,547	9.8
1969	1,921,990	9.5	6,747	10.1
1968	1,930,082	9.7	6,532	9.8
1967	1,851,323	9.4	6,349	9.5
1966	1,863,149	9.5	6,576	9.6
1965	1,828,136	9.4	6,520	9.4
1964	1,798,051	9.4	6,599	9.4
1963	1,813,549	9.6	6,654	9.4
1962	1,756,720	9.5	6,577	9.3
1961	1,701,522	9.3	6,234	9.0
1960	1,711,982	9.5	6,616	9.7

*U.S. data are provisional

Source: National Center for Health Statistics, Hyattsville, Maryland 20782
and Center for Health Policy and Statistics, South Dakota Department of Health.

Leading Causes of Death

South Dakota resident leading causes of death are presented in table 16. Heart Disease continued as the number one cause of death followed by cancer. These two causes of death accounted for approximately 60 percent of the resident deaths during 1989. Diseases of the heart and malignant neoplasms accounted for over 61 percent of white deaths and about 32 percent of Native American deaths. Almost 14 percent of the Native American deaths were caused by accidents, tied for the second leading cause of death with cancer. Less than 5 percent of the resident deaths were caused by accidents.

Median Age at Death

The median age at death for South Dakota resident males and females was 74 and 82 respectively during 1989. Table 17 provides the median age of death by cause for residents of South Dakota. The median age at death was 78 for all South Dakotans, for white residents this figure was 78 compared to 56 for Native Americans.

Leading Cause of Death by Age

The leading cause of death by age group are presented in table 18. Excluding infants, accidents were the leading cause of death through age 34. From 35-54, the leading cause was malignant neoplasms. The leading cause of death after age 54 was diseases of the heart.

TABLE 16
SOUTH DAKOTA RESIDENT LEADING CAUSES OF DEATH, 1989

CAUSE OF DEATH	ALL RACES				WHITE			NATIVE AMERICAN		
	RANK	DEATHS	%	RATE	RANK	DEATHS	%	RANK	DEATHS	%
SOUTH DAKOTA (ALL DEATHS)		6,534				6,095			424	
DISEASE OF THE HEART...(390-398, 402, 404-429)	1	2,383	36.5	334.2	1	2,299	37.7	1	81	19.1
MALIGNANT NEOPLASMS.....(140-208)	2	1,461	22.4	204.9	2	1,399	23.0	2	58	13.7
CEREBROVASCULAR DISEASES....(430-438)	3	509	7.8	71.4	3	497	8.2	9	10	2.4
ACCIDENTS.....(E800-E949)	4	331	5.1	46.3	4	272	4.5	2	58	13.7
CHRONIC OBSTRUCTIVE PULMONARY DISEASES.....(490-496)	5	264	4.0	37.0	5	254	4.2	-	-	-
PNEUMONIA AND INFLUENZA.....(480-487)	6	229	3.5	32.1	6	215	3.5	6	14	3.3
DIABETES MELLITUS.....(250)	7	148	2.3	20.8	7	124	2.0	5	24	5.7
SUICIDE.....(E950-E959)	8	91	1.4	12.8	8	81	1.3	9	10	2.4
CHRONIC LIVER DISEASE AND CIRRHOSIS.....(571)	9	73	1.1	10.2	10	44	0.7	4	29	6.8
ATHEROSCLEROSIS.....(440)	10	63	1.0	8.8	9	61	1.0	-	-	-
ALCOHOLIC PSYCHOSES AND ALCOHOL DEPENDENCY.....(291,303)	-	-	-	-	-	-	-	7	13	3.1
CERTAIN CONDITIONS ORIGINATING IN THE PERINATAL PERIOD.....(760-779)	-	-	-	-	-	-	-	8	11	2.6
ALL OTHER CAUSES	-	982	15.0	137.7	-	849	13.9	-	116	27.4

Rate for all races are per 100,000 population.

Numbers following cause of death are I.C.D. 9 codes.

Due to rounding of disease specific death rates, these will not sum to state death rate.

Source: Center for Health Policy and Statistics, South Dakota Department of Health.

TABLE 17

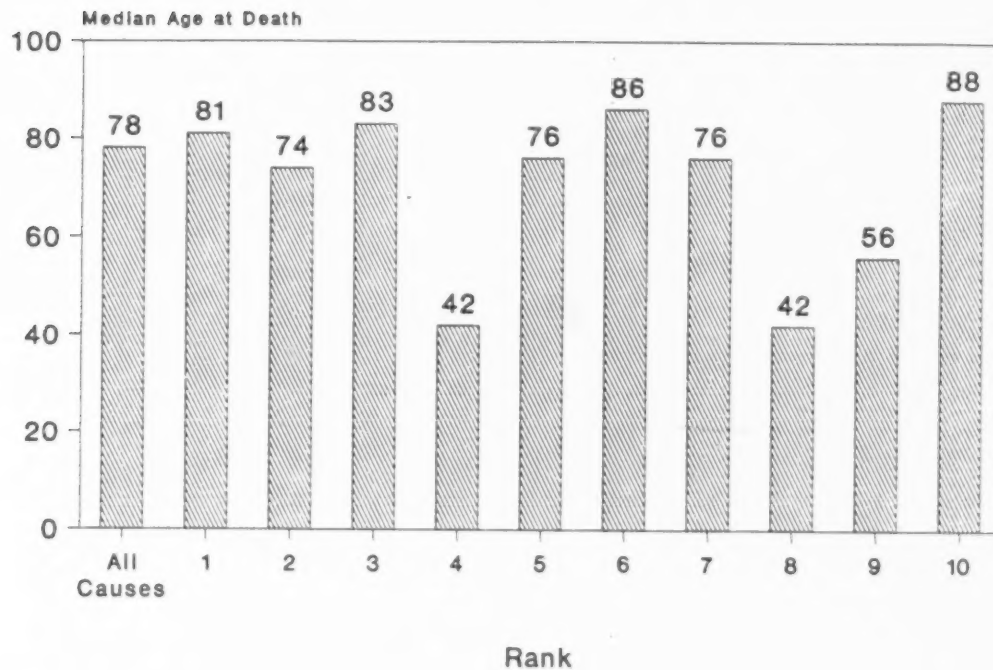
Median Age At Death For South Dakota Residents
From The Ten Leading Causes Of Death
By Race, 1989

CAUSE OF DEATH	MEDIAN AGE AT DEATH IN YEARS		
	ALL RACES	WHITE	NATIVE AMERICAN
SOUTH DAKOTA (ALL DEATHS)	78	78	56
DISEASE OF THE HEART...(390-398, 402, ...404-429)	81	81	68
MALIGNANT NEOPLASMS.....(140-208)	74	74	68
CEREBROVASCULAR DISEASES....(430-438)	83	83	76
ACCIDENTS.....(E800-E949)	42	47	26
CHRONIC OBSTRUCTIVE PULMONARY DISEASES(490-496)	76	77	68
PNEUMONIA AND INFLUENZA.....(480-487)	86	87	66
DIABETES MELLITUS.....(250)	76	78	62
SUICIDE.....(E950-E959)	42	47	20
CHRONIC LIVER DISEASE AND CIRRHOSIS(571)	56	64	50
ATHEROSCLEROSIS.....(440)	88	88	-
ALCOHOLIC PSYCHOSES AND ALCOHOL DEPENDENCY.....(291,303)	-	-	47
CERTAIN CONDITIONS ORIGINATING IN THE PERINATAL PERIOD.....(760-779)	-	-	LESS THAN 1
ALL OTHER CAUSES	79	81	44

Numbers following cause of death are I.C.D. 9 codes.

Source: Center for Health Policy and Statistics, South Dakota Department of Health.

Figure 3
Median Age at Death for the Ten Leading
Causes of Death, South Dakota Residents
1989



Median Age at Death in Years, 1989

Rank	Cause of Death	Median Age
	All causes	78
1	Diseases of the Heart	81
2	Malignant Neoplasms	74
3	Cerebrovascular Diseases	83
4	Accidents	42
5	Chronic Obstructive Pulmonary Disease	76
6	Pneumonia and Influenza	86
7	Diabetes Mellitus	76
8	Suicide	42
9	Chronic Liver Disease and Cirrhosis	56
10	Atherosclerosis	88

Table 18

South Dakota Resident Five Leading Cause of Death by age groups, 1989

Rank	All Ages	Under 1	1-4	5-14	15-24	25-34	35-44	45-54	55-64	64 & Over
1	Diseases of the Heart 2,383	Sudden Infant Death Syndrome 31	Accidents 6	Accidents 22	Accidents 65	Accidents 51	Malignant Neoplasms 30	Malignant Neoplasms 82	Diseases of the Heart 208	Diseases of the Heart 2,078
2	Malignant Neoplasms 1,461	Other Conditions in Perinatal Period 25	Congenital Anomalies 6	Malignant Neoplasms 7	Suicide 23	Suicide 14	Diseases of the Heart 26	Diseases of the Heart 59	Malignant Neoplasms 208	Malignant Neoplasms 1,115
3	Cerebro-vascular Disease 509	Congenital Anomalies 21	Malignant Neoplasms 3	-----	Malignant Neoplasms 4	Malignant Neoplasms 12	Accidents 24	Accidents 33	Chronic Obstructive Pulmonary Disease 25	Cerebro-Vascular Disease 480
4	Accidents 331	Short Gestation and Low Birth Weight 7	-----	-----	-----	Diseases of the Heart 7	Chronic Liver Disease and Cirrhosis 13	Chronic Liver Disease and Cirrhosis 17	Accidents 23	Chronic Obstructive Pulmonary Disease 228
5	Chronic Obstructive Pulmonary Disease 264	External Causes 6	-----	-----	-----	Chronic Liver Disease and Cirrhosis 5	Suicide 9	Suicide 10	Cerebro-vascular Disease 20	Pneumonia and Influenza 210
Total Deaths All Causes	6,534	106	22	34	104	121	144	262	591	5,150

Source: Center for Health Policy and Statistics, South Dakota Department of Health.

TABLE 19
SOUTH DAKOTA RESIDENT DEATHS FOR 15 LEADING CAUSES
AND SELECTED COMPONENTS: 1980, 1988, AND 1989

CAUSE OF DEATH	YEAR OF DEATH	ALL AGES	UNDER 1 YEAR	1-4 YEARS	5-14 YEARS	15-24 YEARS	25-34 YEARS	35-44 YEARS	45-54 YEARS	55-64 YEARS	65-74 YEARS	75-84 YEARS	85 YEARS AND OVER
ALL CAUSES	1989	6534	106	22	34	104	121	144	262	591	1364	1840	1946
	1988	6567	112	25	23	105	125	149	265	692	1256	1875	1980
	1980	6539	145	35	38	175	138	158	358	744	1331	1812	1605
DISEASES OF HEART.....390-398,402,404-429	1989	2383	3	1	-	1	7	26	59	208	492	693	893
	1988	2579	4	-	-	2	8	28	76	247	466	796	952
	1980	2587	3	1	-	3	5	26	113	312	574	829	721
RHEUMATIC FEVER AND RHEUMATIC HEART DISEASE.....390-398	1989	9	-	-	-	-	-	1	-	1	4	2	1
	1988	21	-	-	-	-	-	2	3	2	6	6	2
	1980	26	-	-	-	1	-	1	-	7	7	7	3
HYPERTENSIVE HEART DISEASE.....402	1989	20	-	-	-	-	-	-	1	2	3	4	10
	1988	22	-	-	-	-	-	-	-	1	5	8	8
	1980	36	-	-	-	-	-	-	-	1	8	10	17
HYPERTENSIVE HEART AND RENAL DISEASE.....404	1989	5	-	-	-	-	-	-	-	-	-	2	3
	1988	7	-	-	-	-	-	-	-	-	1	1	5
	1980	17	-	-	-	-	-	-	-	-	1	6	10
ISCHEMIC HEART DISEASE.....410-414	1989	1670	-	-	-	-	-	11	36	161	362	506	594
	1988	1706	-	-	-	-	6	11	47	171	320	555	596
	1980	1981	-	-	-	-	2	18	83	248	466	648	516
ACUTE MYOCARDIAL INFARCTION.....410	1989	1046	-	-	-	-	-	7	23	119	259	341	297
	1988	1035	-	-	-	-	4	7	30	134	235	347	278
	1980	1278	-	-	-	-	1	16	68	199	353	418	223
OTHER ACUTE AND SUBACUTE FORMS OF ISCHEMIC HEART DISEASE.....411	1989	0	-	-	-	-	-	-	-	-	-	-	-
	1988	1	-	-	-	-	-	-	-	1	-	-	-
	1980	7	-	-	-	-	-	-	-	3	1	2	1
ANGINA PECTORIS.....413	1989	1	-	-	-	-	-	-	-	-	-	-	1
	1988	4	-	-	-	-	-	-	-	-	-	4	-
	1980	0	-	-	-	-	-	-	-	-	-	-	-
OLD MYOCARDIAL INFARCTION AND OTHER FORMS OF CHRONIC ISCHEMIC HEART DISEASE.....412,414	1989	623	-	-	-	-	-	4	13	42	103	165	296
	1988	666	-	-	-	-	2	4	17	36	85	204	318
	1980	696	-	-	-	-	1	2	15	46	112	228	292
OTHER DISEASES OF ENDOCARDIUM.....424	1989	39	-	-	-	-	-	-	-	3	7	9	20
	1988	26	-	-	-	-	-	1	2	1	5	7	10
	1980	21	-	-	-	-	-	-	1	2	5	9	4
ALL OTHER FORMS OF HEART DISEASE.....415-423,425-429	1989	640	3	1	-	1	7	14	22	41	116	170	265
	1988	797	4	-	-	2	2	14	24	72	129	219	331
	1980	506	3	1	-	2	3	7	29	54	87	149	171

TABLE 19 (Con't)
SOUTH DAKOTA RESIDENT DEATHS FOR 15 LEADING CAUSES
AND SELECTED COMPONENTS: 1980, 1988, AND 1989

CAUSE OF DEATH	YEAR OF DEATH	ALL AGES	UNDER 1 YEAR	1-4 YEARS	5-14 YEARS	15-24 YEARS	25-34 YEARS	35-44 YEARS	45-54 YEARS	55-64 YEARS	65-74 YEARS	75-84 YEARS	85 YEARS AND OVER
MALIGNANT NEOPLASMS, INCLUDING NEOPLASMS OF LYMPHATIC HEMATOPOIETIC TISSUES.....140-208	1989 1988 1980	1461 1361 1231	.	3 1 3	7 3 4	4 1 9	12 18 12	30 32 27	82 92 100	208 393 215	441 393 366	453 407 319	221 194 176
MALIGNANT NEOPLASMS OF LIP, ORAL CAVITY, AND PHARYNX.....140-149	1989 1988 1980	19 17 17	.	.	.	.	.	.	1 3 1	5 5 3	6 2 7	7 5 4	. 2 1
MALIGNANT NEOPLASMS OF DIGESTIVE ORGANS AND PERITONEUM.....150-159	1989 1988 1980	365 360 376	.	.	.	1	.	3	16	37	107	116	85
MALIGNANT NEOPLASMS OF RESPIRATORY AND INTRATHORACIC ORGANS.....160-165	1989 1988 1980	353 326 253	.	.	.	.	2	4	22	78	125	101	21
MALIGNANT NEOPLASM OF BREAST.....174-175	1989 1988 1980	126 131 114	.	.	.	1	1	10	15	22	35	26	17
MALIGNANT NEOPLASMS OF GENITAL ORGANS.....179-187	1989 1988 1980	202 172 150	.	.	.	.	.	4	15	27	40	30	14
MALIGNANT NEOPLASMS OF URINARY ORGANS.....188-189	1989 1988 1980	77 66 62	.	.	.	.	.	2	7	20	58	79	36
MALIGNANT NEOPLASMS OF ALL OTHER AND UNSPECIFIED SITES.....170-173, 190-199	1989 1988 1980	156 144 128	.	1 1 1	4 1 1	.	6 6 5	7 11 5	7 13 8	16 23 26	39 38 30	49 35 33	27 17 17
LEUKEMIA.....204-208	1989 1988 1980	59 58 55	.	2 1 3	.	2	1 3 2	2	4	7	19	12	10
OTHER MALIGNANT NEOPLASMS OF LYMPHATIC AND HEMATOPOIETIC TISSUES.....200-203	1989 1988 1980	104 87 76	.	.	3	1	2	2	5	13	33	31	14
CEREBROVASCULAR DISEASE.....430-438	1989 1988 1980	509 531 622	.	.	.	1	.	2	6	20	68	182	230
ACCIDENTS AND ADVERSE EFFECTS.....E800-E949	1989 1988 1980	331 287 421	4 2 3	6 12 17	22 17 29	65 57 118	51 53 62	24 35 36	33 18 36	23 24 31	33 24 30	42 23 28	28 22 31
MOTOR VEHICLE ACCIDENTS.....E810-E825	1989 1988 1980	167 150 249	.	3 7 5	14 9 19	48 41 92	38 32 42	14 17 27	15 12 21	10 14 14	13 8 14	10 6 12	2 4 3

TABLE 19 (Con't.)
SOUTH DAKOTA RESIDENT DEATHS FOR 15 LEADING CAUSES
AND SELECTED COMPONENTS: 1980, 1988, AND 1989

CAUSE OF DEATH	YEAR OF DEATH	ALL AGES	UNDER 1 YEAR	1-4 YEARS	5-14 YEARS	15-24 YEARS	25-34 YEARS	35-44 YEARS	45-54 YEARS	55-64 YEARS	65-74 YEARS	75-84 YEARS	85 YEARS AND OVER
ALL OTHER ACCIDENTS AND ADVERSE EFFECTS.....E800-E807 E826-E949	1989 1988 1980	164 137 172	4 2 3	3 5 12	8 8 10	17 16 26	13 21 20	10 18 9	18 6 15	13 10 17	20 16 16	32 17 16	26 18 28
CHRONIC OBSTRUCTIVE PULMONARY DISEASES AND ALLIED CONDITIONS.....490-496	1989 1988 1980	264 246 189	.	.	1 . .	1 . .	1 . .	3 4 2	5 5 12	25 30 25	77 70 58	108 95 69	43 42 23
PNEUMONIA AND INFLUENZA....480-487	1989 1988 1980	229 306 218	2 3 4	.	.	1 1 1	4 . .	1 . .	6 6 3	5 9 4	19 29 19	60 87 80	131 171 101
DIABETES MELLITUS.....250	1989 1988 1980	148 99 84	.	1 . .	.	.	3 2 2	3 4 2	9 4 3	17 10 10	35 24 19	46 27 25	34 27 21
SUICIDE.....E950-E959	1989 1988 1980	91 81 89	.	.	.	23 21 22	14 15 18	9 10 7	10 12 15	10 5 8	13 9 8	10 7 7	2 2 2
CHRONIC LIVER DISEASE AND CIRRHOSIS.....571	1989 1988 1980	73 54 76	.	1 . .	.	.	5 2 5	13 6 11	17 11 27	10 17 16	17 11 10	9 4 3	2 2 2
ATHEROSCLEROSIS.....440	1989 1988 1980	63 75 116	.	.	.	.	.	.	1 1 .	1 3 4	4 7 8	16 16 35	41 48 69
NEPHRITIS, NEPHROTIC SYNDROME, AND NEPHROSIS.....580-589	1989 1988 1980	48 62 54	.	.	.	.	2 . .	.	2 2 1	4 4 2	7 6 12	12 29 18	23 19 20
HOMICIDE AND LEGAL INTERVENTION.....E960-E978	1989 1988 1980	21 32 24	2 . .	1 1 . .	1 1 1	1 14 9	5 9 5	5 2 3	. 2 5	3 1 1	3 2 . .	. 1 . .	1 . .
SEPTICEMIA.....038	1988 1988 1980	28 27 28	1 1 1	.	.	.	.	.	. 1 . .	1 2 6	6 1 3	8 7 8	12 15 8
CERTAIN CONDITIONS ORIGINATING IN THE PERINATAL PERIOD.....760-779	1989 1988 1980	36 48 54	35 47 54	1 1 . .	.	.	.	.	. . .	. . .	. . .	. . .	. . .
CONGENITAL ANOMALIES.....740-759	1989 1988 1980	44 35 53	21 22 36	6 3 3	1 1 . .	. 1 3	2 2 3	3 . .	3 . .	. 3 1	3 2 2	3 1 1	2 . .

Source: Center for Health Policy and Statistics, South Dakota Department of Health.

TABLE 20

SOUTH DAKOTA RESIDENT AGE-SPECIFIC AND AGE-ADJUSTED DEATH RATES FOR 15 LEADING CAUSES
AND SELECTED COMPONENTS: 1980, 1988, AND 1989

CAUSE OF DEATH	YEAR OF DEATH	ALL AGES	UNDER 1 YEAR	1-4 YEARS	5-14 YEARS	15-24 YEARS	25-34 YEARS	35-44 YEARS	45-54 YEARS	55-64 YEARS	65-74 YEARS	75-84 YEARS	85 YRS & OVER	AGE ADJUSTED RATE
ALL CAUSES	1989	916.4	915.5	48.3	31.2	98.4	99.3	156.1	409.5	940.0	2530.2	5521.9	15108.7	461.8
	1988	921.0	967.4	54.9	21.1	99.3	102.6	161.5	414.2	1037.1	2329.9	5626.9	15372.7	464.0
	1980	946.6	1102.1	77.3	35.4	129.4	134.2	237.8	551.0	1151.5	2634.9	6024.5	15392.7	538.2
DISEASE OF THE HEART...390-398,402,404-429	1989	334.2	25.9	2.2	.	0.9	5.7	28.2	92.2	330.8	912.7	2079.7	6933.2	142.4
	1988	361.7	34.5	.	.	1.9	6.6	30.3	118.8	392.9	864.4	2388.8	7391.3	155.4
	1980	374.5	22.8	2.2	.	2.2	4.9	39.1	173.9	482.9	1136.3	2756.3	6914.7	188.3
RHEUMATIC FEVER AND RHEUMATIC HEART DISEASE.....390-398	1989	1.3	.	.	.	.	.	1.1	.	1.6	7.4	6.0	7.8	0.8
	1988	2.9	.	.	.	.	.	2.2	4.7	3.2	11.1	18.0	15.5	2.0
	1980	3.8	.	.	.	0.7	.	1.5	.	10.8	13.9	23.3	26.8	2.4
HYPERTENSIVE HEART DISEASE.402	1989	2.8	.	.	.	.	.	.	1.6	3.2	5.6	12.0	77.6	1.1
	1988	3.1	.	.	.	.	.	.	.	1.6	9.3	24.0	62.1	1.2
	1980	5.2	.	.	.	.	.	.	.	1.5	15.8	33.2	163.0	1.9
HYPERTENSIVE HEART AND RENAL DISEASE.....404	1989	0.7	.	.	.	.	.	.	.	.	.	6.0	23.3	0.2
	1988	1.0	.	.	.	.	.	.	.	.	1.9	3.0	38.8	0.2
	1980	2.5	.	.	.	.	.	.	.	.	2.0	19.9	95.9	0.7
ISCHEMIC HEART DISEASE.....410-414	1989	234.2	.	.	.	.	.	11.9	56.3	256.1	671.5	1519.5	4611.8	100.4
	1988	239.3	.	.	.	.	4.9	11.9	73.5	272.0	593.6	1665.6	4627.3	103.3
	1980	286.8	.	.	.	.	1.9	27.1	127.8	383.8	922.5	2154.5	4948.7	145.6
ACUTE MYOCARDIAL INFARCTION.....410	1989	146.7	.	.	.	.	.	7.6	35.9	189.3	480.4	1023.3	2305.9	67.8
	1988	145.2	.	.	.	.	3.3	7.6	46.9	213.1	435.9	1041.4	2158.4	69.3
	1980	185.0	.	.	.	.	1.0	24.1	104.7	308.0	696.8	1399.8	2138.7	104.4
OTHER ACUTE AND SUBACUTE FORMS OF ISCHEMIC HEART DISEASE.....411	1989	0.0	.	.	.	.	.	.	.	.	.	.	.	0.0
	1988	0.1	.	.	.	.	.	.	.	1.6	.	.	.	0.1
	1980	1.0	.	.	.	.	.	.	.	4.6	2.0	6.6	9.6	0.6
ANGINA PECTORIS.....413	1989	0.1	.	.	.	.	.	.	.	.	.	.	.	0.0
	1988	0.6	.	.	.	.	.	.	.	.	.	12.0	.	0.2
	1980	0.0	.	.	.	.	.	.	.	.	.	.	.	0.0
OLD MYOCARDIAL INFARCTION AND OTHER FORMS OF CHRONIC ISCHEMIC HEART DISEASE.412,414	1989	87.4	.	.	.	.	.	4.3	20.3	66.8	191.1	495.2	2298.1	32.5
	1988	93.4	.	.	.	.	1.6	4.3	26.6	57.3	157.7	612.2	2468.9	33.7
	1980	100.8	.	.	.	.	1.0	3.0	23.1	71.2	221.7	758.1	2800.4	40.6
OTHER DISEASES OF ENDOCARDIUM.....424	1989	5.5	.	.	.	.	.	.	.	4.8	13.0	27.0	155.3	1.9
	1988	3.6	.	.	.	.	.	1.1	3.1	1.6	9.3	21.0	77.6	1.7
	1980	3.0	.	.	.	.	.	.	1.5	3.1	9.9	29.9	38.4	1.5
ALL OTHER FORMS OF HEART DISEASE.....415-423,425-429	1989	89.8	25.9	2.2	.	0.9	5.7	15.2	34.4	62.2	215.2	510.2	2057.5	38.0
	1988	111.8	34.5	.	.	1.9	1.6	15.2	37.5	114.5	239.3	657.2	2569.9	46.9
	1980	73.3	22.8	2.2	.	1.5	2.9	10.5	44.6	83.6	172.2	495.4	1640.0	36.1

TABLE 20 (Con't)

SOUTH DAKOTA RESIDENT AGE-SPECIFIC AND AGE-ADJUSTED DEATH RATES FOR 15 LEADING CAUSES
AND SELECTED COMPONENTS: 1980, 1988, AND 1989

CAUSE OF DEATH	YEAR OF DEATH	ALL AGES	UNDER 1 YEAR	1-4 YEARS	5-14 YEARS	15-24 YEARS	25-34 YEARS	35-44 YEARS	45-54 YEARS	55-64 YEARS	65-74 YEARS	75-84 YEARS	85 YRS & OVER	AGE ADJUSTED RATE
MALIGNANT NEOPLASMS, INCLUDING NEOPLASMS OF LYMPHATIC AND HEMATOPOIETIC TISSUES...140-208	1989	204.9	.	6.6	6.4	3.8	9.8	32.5	128.2	330.8	818.1	1359.5	1715.8	117.9
	1988	190.9	8.6	2.2	2.7	0.9	14.8	34.7	143.8	348.3	729.0	1221.4	1506.2	113.7
	1980	178.2	.	6.6	3.7	6.7	11.7	40.6	153.9	332.8	724.5	1060.6	1687.9	112.8
MALIGNANT NEOPLASMS OF LIP, ORAL CAVITY, AND PHARYNX...140-149	1989	2.7	.	.	.	.	.	.	1.6	8.0	11.1	21.0	.	1.7
	1988	2.4	.	.	.	.	.	.	4.7	8.0	3.7	15.0	15.5	1.7
	1980	2.5	.	.	.	.	.	1.5	1.5	4.6	13.9	13.3	9.6	1.7
MALIGNANT NEOPLASMS OF DIGESTIVE ORGANS AND PERITONEUM...150-159	1989	51.2	.	.	.	0.9	.	3.3	25.0	58.9	198.5	348.1	659.9	25.8
	1988	50.5	.	.	.	.	3.3	4.3	21.9	82.7	163.2	360.1	605.6	26.2
	1980	54.4	.	.	.	.	1.9	4.5	38.5	96.0	209.8	342.5	719.3	31.3
MALIGNANT NEOPLASMS OF RESPIRATORY AND INTRATHORACIC ORGANS...160-165	1989	49.5	.	.	.	.	1.6	4.3	34.4	124.1	231.9	303.1	163.0	31.8
	1988	45.7	.	.	.	.	.	5.4	43.8	122.5	224.5	246.1	100.9	31.2
	1980	36.6	.	.	.	.	1.0	6.0	60.0	78.9	160.3	212.8	124.7	26.2
MALIGNANT NEOPLASM OF BREAST...174-175	1989	17.7	.	.	.	.	0.8	10.8	23.4	35.0	64.9	78.0	132.0	12.1
	1988	18.4	.	.	.	0.9	.	4.3	23.4	42.9	74.2	90.0	108.7	12.4
	1980	16.5	.	.	.	.	.	12.0	18.5	35.6	73.2	66.5	134.3	11.8
MALIGNANT NEOPLASMS OF GENITAL ORGANS...179-187	1989	28.3	.	.	.	.	.	2.2	10.9	31.8	107.6	237.1	279.5	14.2
	1988	24.1	.	.	.	.	3.3	3.3	9.4	25.4	90.9	183.1	256.2	12.4
	1980	21.7	.	.	.	.	1.0	3.0	12.3	38.7	81.2	136.3	306.9	12.3
MALIGNANT NEOPLASMS OF URINARY ORGANS...188-189	1989	10.8	.	.	.	.	.	.	7.8	15.9	35.2	96.0	85.4	5.8
	1988	9.3	.	.	.	.	0.8	3.3	4.7	11.1	22.3	81.0	100.9	4.8
	1980	9.0	.	.	0.9	0.7	.	.	1.5	18.6	43.6	53.2	86.3	5.2
MALIGNANT NEOPLASMS OF ALL OTHER AND UNSPECIFIED...170-173, 190-199	1989	21.9	.	2.2	3.7	.	4.9	7.6	10.9	25.4	72.3	147.0	209.6	12.6
	1988	20.2	.	.	0.9	.	4.9	11.9	20.3	36.6	70.5	105.0	132.0	13.5
	1980	18.5	.	.	0.9	2.2	4.9	7.5	12.3	40.2	59.4	109.7	163.0	12.3
LEUKEMIA...204-208	1989	8.3	.	4.4	.	1.9	0.8	2.2	6.3	11.1	35.2	36.0	77.6	5.2
	1988	8.1	8.6	2.2	0.9	.	2.5	2.2	3.1	4.8	29.7	48.0	100.9	4.4
	1980	8.0	.	6.6	1.9	1.5	.	3.0	4.6	7.7	29.7	49.9	76.7	5.1
OTHER MALIGNANT NEOPLASMS OF LYMPHATIC AND HEMATOPOIETIC TISSUES...200-203	1989	14.6	.	.	2.7	0.9	1.6	2.2	7.8	20.7	61.2	93.0	108.7	8.7
	1988	12.2	.	.	0.9	.	.	.	12.5	14.3	50.1	93.0	85.4	7.1
	1980	11.0	.	.	.	2.2	2.9	3.0	4.6	12.4	53.4	76.5	67.1	6.9
CEREBROVASCULAR DISEASE...430-438	1989	71.4	.	.	.	0.9	.	2.2	9.4	31.8	126.1	546.2	1785.7	24.6
	1988	74.5	.	.	.	.	1.6	9.8	9.4	31.8	142.8	519.2	1894.4	26.4
	1980	90.0	.	.	0.9	.	2.9	10.5	7.7	43.3	199.9	734.8	2455.2	35.7
ACCIDENTS AND ADVERSE EFFECTS...E800-E949	1989	46.4	34.5	13.2	20.2	61.5	41.9	26.0	51.6	36.6	61.2	126.0	217.4	41.2
	1988	40.3	17.3	26.4	15.6	53.9	43.5	37.9	28.1	38.2	44.5	69.0	170.8	37.0
	1980	60.9	22.8	37.5	27.0	87.3	60.3	54.2	55.4	48.0	59.4	93.1	297.3	56.2
MOTOR VEHICLE ACCIDENTS...E810-E825	1989	23.4	.	6.6	12.8	45.4	31.2	15.2	23.4	15.9	24.1	30.0	15.5	23.8
	1988	21.0	.	15.4	8.2	38.3	26.3	18.4	18.8	22.3	14.8	18.0	31.1	21.4
	1980	36.0	.	11.0	17.7	68.1	40.8	40.6	32.3	21.7	27.7	39.9	28.8	36.0

TABLE 20 (Con't)
SOUTH DAKOTA RESIDENT AGE-SPECIFIC AND AGE-ADJUSTED DEATH RATES FOR 15 LEADING CAUSES
AND SELECTED COMPONENTS: 1980, 1988, AND 1989

CAUSE OF DEATH	YEAR OF DEATH	ALL AGES	UNDER 1 YEAR	1-4 YEARS	5-14 YEARS	15-24 YEARS	25-34 YEARS	35-44 YEARS	45-54 YEARS	55-64 YEARS	65-74 YEARS	75-84 YEARS	85 YRS & OVER	AGE ADJUSTED RATE
ALL OTHER ACCIDENTS AND ADVERSE EFFECTS.....EB00-EB07 EB26-EB49	1989	23.0	34.5	6.6	7.3	16.1	10.7	10.8	28.1	20.7	37.1	96.0	201.9	17.4
	1988	19.2	17.3	11.0	7.3	15.1	17.2	19.5	9.4	15.9	29.7	51.0	139.8	15.6
	1980	24.9	22.8	26.5	9.3	19.2	19.5	13.5	23.1	26.3	31.7	53.2	268.5	20.2
CHRONIC OBSTRUCTIVE PULMONARY DISEASES AND ALLIED CONDITIONS.....490-496	1989	37.0	-	-	0.9	0.9	0.8	3.3	7.8	39.8	142.8	324.1	333.9	18.5
	1988	34.5	-	-	-	-	-	4.3	7.8	47.7	129.9	285.1	326.1	17.5
	1980	27.4	-	-	-	-	-	3.0	18.5	38.7	114.8	229.4	220.6	15.8
PNEUMONIA AND INFLUENZA...480-487	1989	32.1	17.3	-	-	0.9	3.3	1.1	9.4	8.0	35.2	180.1	1017.1	10.5
	1988	42.9	25.9	-	-	0.9	-	-	9.4	14.3	53.8	261.1	1327.6	13.6
	1980	31.6	30.4	6.6	-	0.7	1.0	3.0	4.6	6.2	37.6	266.0	968.6	11.8
DIABETES MELLITUS.....250	1989	20.8	-	2.2	-	-	2.5	3.3	14.1	27.0	64.9	138.0	264.0	11.1
	1988	13.9	-	-	-	-	1.6	4.3	6.3	15.9	51.9	72.0	209.6	7.2
	1980	12.2	-	-	-	1.5	1.9	3.0	4.6	15.5	37.6	83.1	201.4	6.6
SUICIDE.....E950-E959	1989	12.8	-	-	-	21.8	11.5	9.8	15.6	15.9	24.1	30.0	15.5	12.0
	1988	11.4	-	-	-	19.9	12.3	10.8	18.8	8.0	16.7	21.0	15.5	11.2
	1980	12.9	-	-	1.9	16.3	17.5	10.5	23.1	12.4	15.8	23.3	19.2	12.5
CHRONIC LIVER DISEASE AND CIRRHOSIS.....571	1989	10.2	-	2.2	-	-	4.1	14.1	26.6	15.9	31.4	27.0	15.5	9.1
	1988	7.6	-	-	-	-	1.6	6.5	17.2	27.0	20.4	12.0	15.5	6.7
	1980	11.0	7.6	-	-	0.7	4.9	16.6	41.6	24.8	19.8	10.0	19.2	11.4
ATHEROSCLEROSIS.....440	1989	8.8	-	-	-	-	-	-	1.6	1.6	7.4	48.0	318.3	2.4
	1988	10.5	-	-	-	-	-	-	1.6	4.8	13.0	48.0	372.7	3.1
	1980	16.8	-	-	-	-	-	-	-	6.2	15.8	116.4	661.7	5.1
NEPHRITIS, NEPHROTIC SYNDROME, AND NEPHROSIS.....580-589	1989	6.7	-	-	-	-	1.6	-	3.1	6.4	13.0	36.0	178.6	2.6
	1988	8.7	-	-	-	-	-	-	3.1	6.4	11.1	87.0	147.5	3.6
	1980	7.8	-	-	-	-	-	1.5	1.5	3.1	23.8	59.8	191.8	3.4
HOMICIDE AND LEGAL INTERVENTION.....E960-E978	1989	2.9	17.3	-	0.9	0.9	4.1	5.4	-	4.8	5.6	-	7.8	2.7
	1988	4.5	-	2.2	-	13.2	7.4	2.2	3.1	1.6	3.7	3.0	-	4.8
	1980	3.5	-	-	0.9	6.7	4.9	4.5	7.7	1.5	-	-	-	3.8
SEPTICEMIA.....038	1989	3.9	8.6	-	-	-	-	-	-	1.6	11.1	24.0	93.2	1.5
	1988	3.8	8.6	-	-	-	-	-	-	3.2	1.9	21.0	116.5	1.3
	1980	4.1	7.6	2.2	-	-	-	1.5	-	9.3	5.9	26.6	76.7	2.2
CERTAIN CONDITIONS ORIGINATING IN THE PERINATAL PERIOD....760-779	1989	5.0	302.3	2.2	-	-	-	-	-	-	-	-	-	4.8
	1988	6.7	405.9	2.2	-	-	-	-	1.6	-	-	-	-	6.4
	1980	7.8	410.4	-	-	-	-	-	-	-	-	-	-	6.3
CONGENITAL ANOMALIES.....740-759	1989	6.2	181.4	13.2	0.9	-	1.6	3.3	4.7	-	5.6	9.0	15.5	5.5
	1988	4.9	190.0	6.6	0.9	0.9	1.6	-	-	4.8	3.7	3.0	-	4.6
	1980	7.7	288.8	6.6	-	2.2	2.9	-	3.1	1.5	4.0	3.3	-	6.5

Note: The age-adjusted rates presented in this report were computed by the direct method, that is, by applying the age-specific death rates for a specific group or cause of death to the standard population distributed by age. The total population as enumerated in 1940 was selected as the standard. The age-adjusted rates were based on 10-year age groups. It is important not to compare age-adjusted death rates with crude rates.

Source: Center for Health Policy and Statistics, South Dakota Department of Health.

Induced Abortion

South Dakota Induced Abortions an Overview: 1989	
Total Induced Abortions in South Dakota (Occurrences)	900
Total Induced Abortions in South Dakota (Residents)	745

South Dakota Abortions

In 1989, 900 abortions were performed in South Dakota, of these 745 were South Dakota residents. South Dakota residents accounted for 82.8 percent of the abortions performed in the state. During 1988 and 1987, 86.9 percent and 87.4 percent respectively were performed on South Dakota residents. This reflects a slight declining trend over the last three years.

The majority of women (84.4 percent) who obtained induced abortions in 1989 had no previous abortions, 12.3 percent had one previous abortion, and the remaining women had obtained more than one previous abortion.

Patient's Age and Race

The largest number of women obtaining induced abortions were in the less than 20 age group, about 31 percent of the total abortions. This also holds true for South Dakota residents where adolescents obtained 234 abortions in the state, just over 31 percent of resident abortions.

Table 22 shows that 848 or 94 percent of the reported induced abortions performed in South Dakota were to white women. Last year white women represented 93 percent of the induced abortions performed in the state.

TABLE 21
INDUCED ABORTIONS IN SOUTH DAKOTA BY PATIENT'S STATE OF
RESIDENCE AND AGE GROUP, 1989

	TOTAL	AGE OF PATIENT				
		0-19	20-24	25-29	30-34	35 & +
TOTAL NUMBER PERCENT	900 100.0	277 30.8	263 29.2	184 20.4	109 12.1	67 7.5
STATE OF RESIDENCE						
SOUTH DAKOTA	745	234	209	155	93	54
MINNESOTA	80	23	28	17	7	5
IOWA	61	17	21	8	7	8
OTHER	14	3	5	4	2	-

Source: Center for Health Policy and Statistics, South Dakota Department of Health.

Table 22

Induced Abortions Occurring in South Dakota
by Age Group and Race of Patient, 1989

Patient's Age	Total	Patient's Race		
		White	Native American	Other
Total				
Number	900	848	41	11
Percent	100.0	94.2	4.6	1.2
00 - 19	277	260	17	-
20 - 24	263	251	10	2
25 - 29	184	176	5	3
30 - 34	109	97	7	5
35 - 39	52	50	1	1
40 & +	15	14	1	-

Table 23

South Dakota Induced Abortions by South Dakota Residents,
Age Group, and Race of Patient, 1989

Patient's Age	Total	Patient's Race		
		White	Native American	Other
Total				
Number	745	694	40	11
Percent	100.0	93.1	5.4	1.5
00 - 19	234	217	17	-
20 - 24	209	198	9	2
25 - 29	155	147	5	3
30 - 34	93	81	7	5
35 - 39	45	43	1	1
40 & +	9	8	1	-

Source: Center for Health Policy and Statistics,
South Dakota Department of Health.



Marriages and Divorces



South Dakota Marriages and Divorces an Overview: 1989

Marriages:

Number Occurring in S.D.	7,108
S.D. Rate per 1,000 Population	10.0
U.S. Rate per 1,000 Population(Provisional)	9.7
Age of Bride in South Dakota (Years)	
Mean	28
Median	25
Mode	20
Range	
Lower	14
Upper	83
Age of Groom in South Dakota (Years)	
Mean	31
Median	27
Mode	23
Range	
Lower	16
Upper	85

Divorces:

Number Occurring in S.D.	2,624
S.D. Rate per 1,000 Population	3.7
U.S. Rate per 1,000 Population(Provisional)	4.7
Years Married Before Termination in S.D.	
Mean	9
Median	6
Mode	2
Range	
Lower	Less than 1
Upper	58

Source: Center for Health Policy and Statistics,
South Dakota Department of Health.

Table 24
Marriages and Marriage Rates by Occurrence
South Dakota and United States
1960-1989

Year	United States		South Dakota	
	Number	Crude Rate	Number	Crude Rate
*1989	2,404,000	9.7	7,108	10.0
*1988	2,389,000	9.7	7,328	10.3
1987	2,421,000	9.9	6,996	9.9
1986	2,407,099	10.0	7,386	10.4
1985	2,412,625	10.1	7,793	11.0
1984	2,477,192	10.5	8,057	11.5
1983	2,445,604	10.5	8,013	11.5
1982	2,456,278	10.6	8,353	12.1
1981	2,422,145	10.5	8,662	12.5
1980	2,390,252	10.5	8,800	12.7
1979	2,331,337	10.4	8,978	13.0
1978	2,282,272	10.3	10,638	15.4
1977	2,178,367	9.9	10,359	15.1
1976	2,154,807	9.9	10,781	15.7
1975	2,152,662	10.0	11,074	16.3
1974	2,229,667	10.4	11,928	17.5
1973	2,284,108	10.8	12,291	18.0
1972	2,282,154	10.9	12,151	17.9
1971	2,190,481	10.5	11,363	16.9
1970	2,158,802	10.5	11,034	16.9
1969	2,145,000	10.6	10,909	16.3
1968	2,069,000	10.4	10,347	15.5
1967	1,927,000	9.7	9,051	13.5
1966	1,857,000	9.5	8,517	12.5
1965	1,800,000	9.3	8,317	12.0
1964	1,725,000	9.0	8,055	11.5
1963	1,654,000	8.8	7,470	10.6
1962	1,577,000	8.5	6,954	9.9
1961	1,548,000	8.4	6,213	9.0
1960	1,523,000	8.5	5,789	8.5

*U.S. data are provisional

Source: National Center for Health Statistics, Hyattsville, Maryland 20782 and Center for Health Policy and Statistics, South Dakota Department of Health.

Marriages in South Dakota

Marriage rates in South Dakota reached their peak in 1973 at 18 marriages per 1,000 population and have decreased through 1985 at about 10 per 1,000 population. This is unlike the United States marriage rate which held fairly stable at about 10 marriages per 1,000 population throughout the 70's and 80's. Table 24 provides the United States and South Dakota marriage rates from 1960 through 1989.

The mean or average age of bride in 1989 was 28 years of age while the median age was 25. The ages of the brides in 1989 ranged from a low of 14 years of age to a high of 83.

Grooms ranged in age from 16 years old to 85 years old. The mean or average age of groom was 31, and the median age was 27 in South Dakota for 1989.

The age of bride most repeated in 1989 was 20 and the most repeated age of groom was 23 years of age.

Figure 4
Marriages Occurring in
South Dakota and United States
1960 - 1989

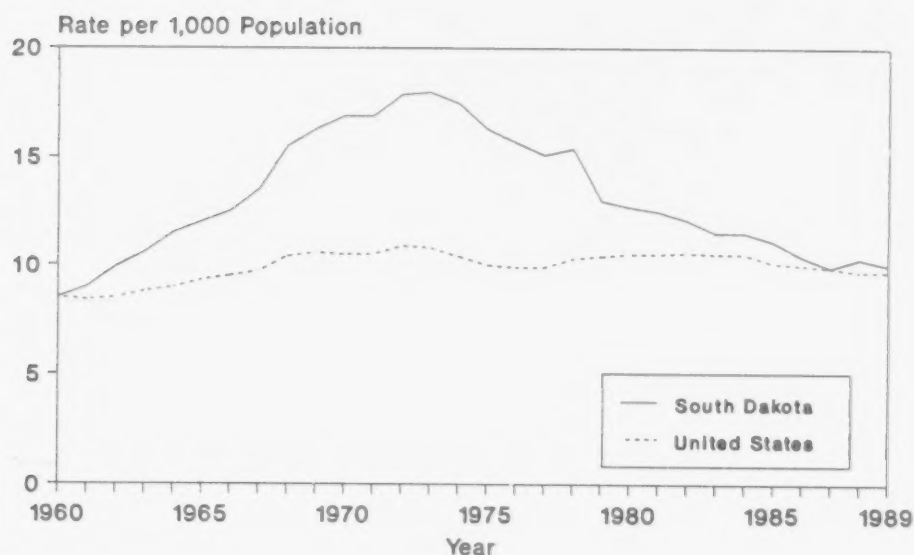


Table 25

Number and Rates of Divorces and Annulments by Occurrence,
South Dakota and United States
1960-1989

Year	United States		South Dakota	
	Number	Crude Rate	Number	Crude Rate
*1989	1,163,000	4.7	2,624	3.7
*1988	1,183,000	4.8	2,649	3.7
1987	1,157,000	4.8	2,696	3.8
1986	1,178,000	4.9	2,585	3.6
1985	1,190,000	5.0	2,566	3.6
1984	1,169,000	5.0	2,498	3.6
1983	1,158,000	4.9	2,556	3.7
1982	1,170,000	5.0	2,564	3.7
1981	1,213,000	5.3	2,772	4.0
1980	1,189,000	5.2	2,811	4.1
1979	1,181,000	5.2	2,665	3.9
1978	1,130,000	5.1	2,449	3.5
1977	1,091,000	5.0	2,436	3.5
1976	1,083,000	5.0	2,352	3.4
1975	1,036,000	4.8	2,232	3.3
1974	977,000	4.6	2,015	3.0
1973	915,000	4.3	1,802	2.6
1972	845,000	4.0	1,632	2.4
1971	773,000	3.7	1,408	2.1
1970	708,000	3.5	1,357	2.0
1969	639,000	3.2	1,255	1.9
1968	584,000	2.9	1,243	1.9
1967	523,000	2.6	1,090	1.6
1966	499,000	2.5	949	1.4
1965	479,000	2.5	1,015	1.5
1964	450,000	2.4	951	1.4
1963	428,000	2.3	953	1.3
1962	413,000	2.2	871	1.2
1961	414,000	2.3	881	1.3
1960	393,000	2.2	806	1.2

*U.S. data are provisional

Source: National Center for Health Statistics, Hyattsville,
Maryland 20782 and Center for Health Policy and
Statistics, South Dakota Department of Health.

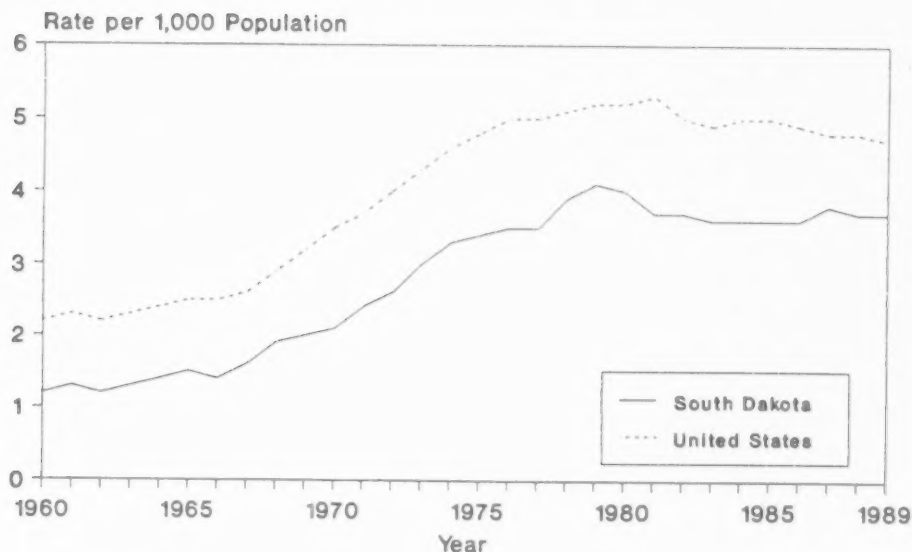
Divorces in South Dakota

The divorce rate for South Dakota has held fairly stable since the mid seventies while the national rate tends to be about one divorce per 1,000 population more than the state rate.

The mean or average length of marriage before termination in South Dakota in 1989 was 9 years. The median duration of marriage before termination was 6 years.

The length of time married before terminating ranges from less than one year to fifty-eight years for South Dakota residents in 1989.

Figure 5
Divorces Occurring in
South Dakota and United States
1960 - 1989





Communicable Diseases



COMMUNICABLE DISEASE SURVEILLANCE

The South Dakota State Department of Health is authorized by SDCL 34-22-12 to collect and process mandatory reports of communicable diseases from physicians, hospitals, laboratories, and institutions. This includes designating certain diseases as reportable as well as establishing the mechanics for reporting communicable diseases and the use of public health measures for control purposes.

Alphabetic List of Notifiable Diseases

AIDS (Acquired Immuno- deficiency Syndrome)	Hepatitis (viral):	Rabies:
. Human Immunodeficiency Virus (HIV) infection (seropositive ELISA and Western blot)	. A (infectious)	. In animals
. AIDS-related conditions (ARC)	. B (serum)	. <u>In humans</u>
. Clinical AIDS	. non-A, non-B	Rheumatic fever (acute)
<u>Anthrax</u>	. Unspecified	Rocky Mountain spotted fever
<u>Botulism</u>	Herpesvirus infection (neonatal)	Rubella
. Foodborne	*Influenza or influenza- like illness	Rubella, congenital syndrome
. Infant	Legionellosis	Salmonellosis
. Other	Leprosy	Scarlet fever
Brucellosis	Leptospirosis	Sexually Transmitted Diseases
Campylobacteriosis	Listeriosis	. Chancroid
*Chickenpox	Lyme disease	. Chlamydial infections
<u>Cholera</u>	Malaria	. Gonorrhea
<u>Dengue</u>	<u>Measles</u>	. Granuloma inguinale
<u>Diphtheria</u>	Meningococcal infections	. Lymphogranuloma venereum
Encephalitis	Meningitis	. <u>Syphilis</u>
. Primary	. Aseptic	Shigellosis
. Post-infectious	. Bacterial	*Streptococcal pharyngitis
Giardiasis	Mumps	Tetanus
Haemophilus influenza type b infections:	<u>Pertussis</u>	Toxic shock syndrome
. Meningitis	<u>Plague</u>	Trichinosis
. Other invasive disease	<u>Polioomyelitis</u>	Tuberculosis
	. Paralytic	Tularemia
	. Nonparalytic	Typhoid fever
	. Unspecified	Typhus fever
	Psittacosis	Yellow Fever

PLEASE NOTE: Underlined - Conditions with potential for epidemic spread or which require rapid action: Immediate telephone report required.

* Report by number of cases only.

Additional Reporting

In addition to the above list of diseases, reports of the following occurrences are requested:

1. Disease occurrences of unusual significance, incidence, or concentration (nosocomial outbreaks, epidemic acute URI or diarrheal disease, rash illness, etc.) which may merit epidemiological evaluation.
2. Foodborne and waterborne outbreaks - suspected common source outbreaks characterized by gastrointestinal symptoms.
3. Related occurrences for which expanded national surveillance has been established:
 - A. Reye syndrome
 - B. Guillain-Barre' syndrome (only cases occurring within 8 weeks following administration of any vaccination)
 - C. Kawasaki disease
 - D. Herpes simplex (genital)
 - E. Adverse reactions to vaccination (reactions serious enough to require a visit to a physician or hospitalization within 4 weeks after vaccination).

VACCINE-PREVENTABLE DISEASES

Remarkable accomplishments have been made in reducing vaccine-preventable disease morbidity and mortality during the past 20 years. Factors contributing to disease reduction during this period include enacting a statewide school immunization law in 1971; implementing child-care facility immunization standards; providing new vaccines in public clinics (measles vaccine distribution began in 1967, rubella in 1969, mumps in 1976 and Haemophilus influenzae b in 1989); and, since 1978, providing adequate free supplies of all childhood vaccines for private and public clinic use.

In 1989, and for the tenth consecutive year, there were no cases of measles reported in South Dakota. Likewise, there were no cases of tetanus, diphtheria or polio. South Dakota has been polio-free since 1964.

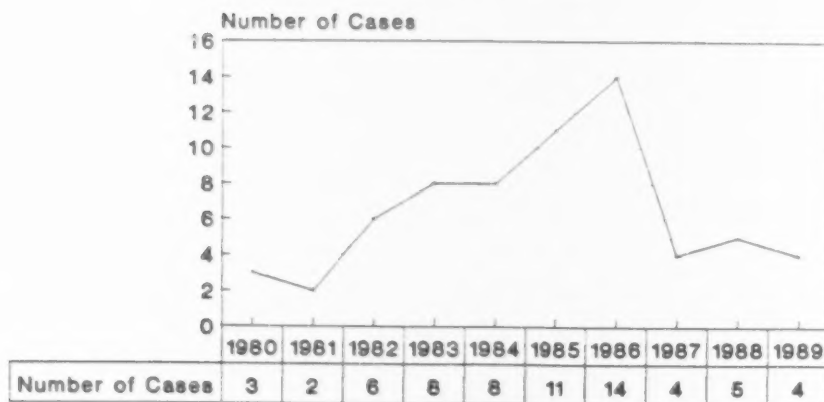
There were also no cases of rubella reported in South Dakota during 1989. Rubella is a common childhood rash disease that is often overlooked or misdiagnosed. By far, the most important consequences of rubella are the fetal deaths and anomalies that frequently result from rubella infection in early pregnancy. Preventing infection of the fetus and consequently, congenital rubella syndrome are major objectives of rubella immunization programs. Rubella morbidity in South Dakota has also been significantly affected by measles elimination activities since immunization programs generally have utilized a combined measles-mumps-rubella vaccine. One delayed case of congenital rubella syndrome that occurred in 1978 was reported in South Dakota in 1983, the first since 1974.

In 1986, after 15 years of continuous decline in the reported incidence of mumps in the United States, there was an increase in reported cases. In 1987, a fourfold increase over 1986 was observed. This pattern is in keeping with the history of immunization in the United States. It was not until 1977 that the Immunization Practices Advisory Committee (ACIP) first began to recommend routine use of mumps vaccine for children 12 months of age or older. A more aggressive approach to the vaccination of susceptible older children and young adults was not advocated until 1980.

With the gradual accumulation and increasing age of the pool of susceptibles, outbreaks are extending beyond secondary schools into colleges and even the workplace. Mumps is becoming a disease of adults instead of children. In 1987, eighty-nine cases of mumps were reported from college campus outbreaks in South Dakota. Aggressive immunization policies were implemented at the college entry level and have had a significant impact on incidence of mumps. One case was reported in 1988 and no cases in 1989.

During 1989, 4 cases of pertussis were reported in South Dakota. Complications of pertussis include pneumonia, otitis media, atelectasis, emphysema, bronchiectasis, convulsions and brain damage. Death occurs in one percent or less of infections. The disease is most severe in young infants; 70 percent of all deaths occur during the first year of life. The efficacy of the current pertussis vaccine and its generalized use have resulted in remarkable reductions in pertussis morbidity. As reflected in Figure 6, pertussis is reported sporadically each year with an occasional outbreak. In 1986 a small outbreak was investigated, the first since 1976.

Figure 6
South Dakota Pertussis Cases
1980-1989



— Number of Cases

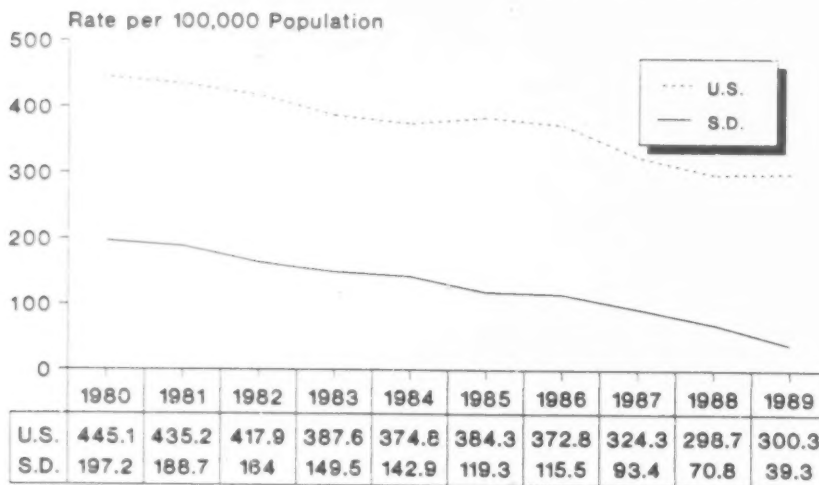
SEXUALLY TRANSMITTED DISEASES

Gonorrhea

In South Dakota, gonorrhea ranks second among reportable sexually transmitted diseases. The number of cases of gonorrhea reported in South Dakota decreased from 500 in 1988 to 280 in 1989. The 1989 incidence reflects the general declining trend of reported gonorrhea in South Dakota observed since 1977, when 1,656 cases were reported. During this same time period, the number of cases reported annually in the United States has declined less dramatically.

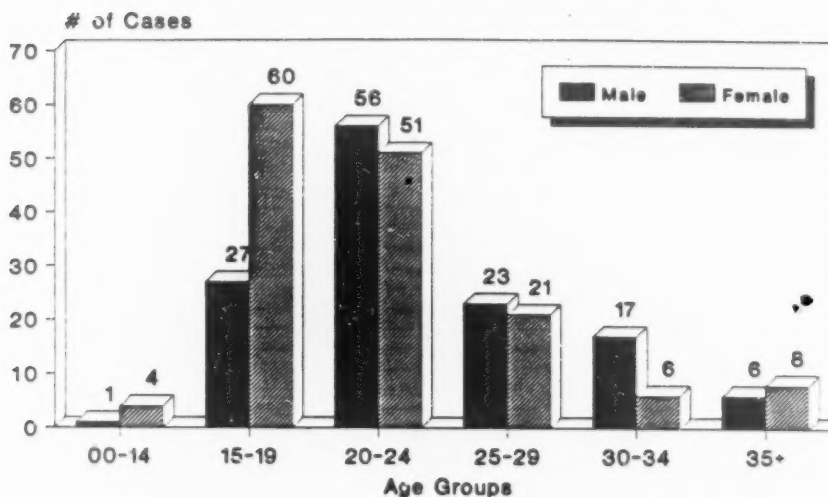
South Dakota's 1989 gonorrhea case rate was 39.3 per 100,000 population, which is considerably less than that of the national case rate of 300.3. (see Figure 7) South Dakota's gonorrhea incidence is at a level where domestic eradication is achievable (defined as 50 cases per 100,000 population with half the cases having an out-of-state source of infection or being within one generation of an out-of-state source). The plan addresses such areas of gonorrhea control as disease intervention, clinician training, disease reporting, and STD education.

Figure 7
Gonorrhea Case Rates
United States and South Dakota 1980-1989



The incidence of gonorrhea has generally been highest in the sexually active age groups, with a peak among 20-24 year-olds of both sexes. Gonorrhea rates among males and females are about the same, indicating that control program elements are properly balanced. (see Figure 8)

Figure 8
South Dakota Gonorrhea Cases
by Sex and Age, 1989



South Dakota's American Indian population contributes a disproportionate amount to the state's reported cases of gonorrhea - nearly one-half the annual reported morbidity. As reflected in Table 26, the gonorrhea case rate among American Indians still surpasses that of the general population. Although there are unique problems which make it difficult to conduct effective gonorrhea control programs on Indian Reservations, a steady declining trend has been the result of aggressive intervention activities.

Table 26
South Dakota Gonorrhea Case Rates per 100,000 Population
by Race 1984-1989

Year	American Indian	Other Races	All Races
1984	902.7	95.0	142.9
1985	751.0	73.3	119.3
1986	704.8	72.7	115.5
1987	677.4	51.0	93.4
1988	517.0	38.0	70.8
1989	278.4	22.1	39.3

In 1981, the first case of penicillinase-producing Neisseria gonorrhoeae (PPNG) was reported in South Dakota. This strain of gonorrhea, which is resistant to treatment with penicillin, is viewed as a serious threat to gonorrhea control programs throughout the United States. During 1989 only one PPNG case was reported in South Dakota.

Syphilis

Four cases of early, infectious syphilis (primary, secondary, and early latent of less than one year's duration) were reported in South Dakota during 1989. Epidemiological evidence supports the assumption that South Dakota is free of indigenously acquired or transmitted syphilis. Accordingly, the occurrence of an early syphilis case in South Dakota is considered a public health emergency by the South Dakota Department of Health, and it receives immediate epidemiological action.

Chlamydia

A surveillance program for the identification of chlamydial infections was instituted in 1987. A major objective of the STD Program is to incorporate chlamydia into the realm of sexually transmitted disease (STD) prevention and control. Chlamydia has been recognized nationally as a leading cause of pelvic inflammatory disease and fertility problems in young women. Nationwide chlamydia incidence is estimated to be at least twice that of gonorrhea.

Chlamydia is by far the most common sexually transmitted disease in South Dakota. Testing for chlamydia infection first became available to clinicians in 1985 with the introduction of direct antigen testing. Since 1986 chlamydia screening has been performed among sexually active women in state family planning clinics and Indian Health Service facilities. These facilities continue to report the majority of the state's chlamydia infections. Chlamydia screening and diagnostic testing is slowly becoming more popular with other state health care providers. Infections due to Chlamydia trachomatis first became reportable to the Department of Health in January of 1988. The Communicable Disease Program estimates the current chlamydia case rate to be approximately 600 per 100,000 state residents, 12 times the current gonorrhea rate. Table 27 depicts chlamydia morbidity for the past 5 years and reflects the results of screening activities in South Dakota since testing has become available.

Table 27
Chlamydia Infections Reported to the Department of Health
by Sex
South Dakota 1985 - 1989

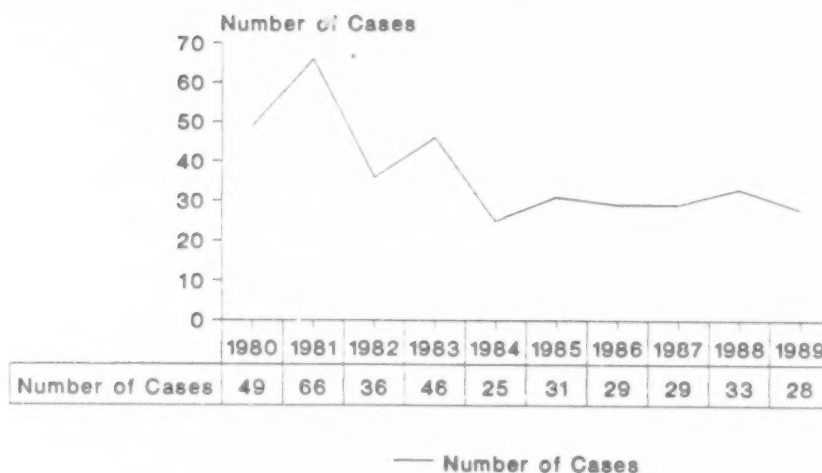
Sex	1985*	1986*	1987*	1988	1989
Male	25	174	294	375	339
Female	210	1505	2002	1978	1925
Total	235	1679	2296	2353	2264

* voluntary disease reports

TUBERCULOSIS

During calendar year 1989 a total of 28 cases of active tuberculosis was reported to the South Dakota Department of Health. Reported tuberculosis cases over the past decade represent a significantly declining trend in incidence as illustrated in Figure 9.

Figure 9
South Dakota Tuberculosis Cases
1980-1989



The remaining challenge to eliminate tuberculosis in South Dakota rests with solving the problems of disease activation among the elderly and the American Indian population. Table 28 is a comparison of tuberculosis case rates for the nation and for South Dakota in 1989.

Table 28
Tuberculosis Case Rates per 100,000 Population 1989

Place and/or Race	Case Rate
United States	9.3
South Dakota	3.9
American Indian	40.1
All Other Races	1.4

With increasing age persons previously infected with tuberculosis are at high risk for developing active disease. Some risk factors include the aging immune system and underlying chronic health problems such as diabetes, heart or lung disease. Figure 10 shows tuberculosis incidence by race for 1989, and Figure 11 reflects the incidence of tuberculosis by age and sex. These are the groups targeted for future tuberculosis elimination activities.

Figure 10
South Dakota Tuberculosis Cases
by Race, 1989

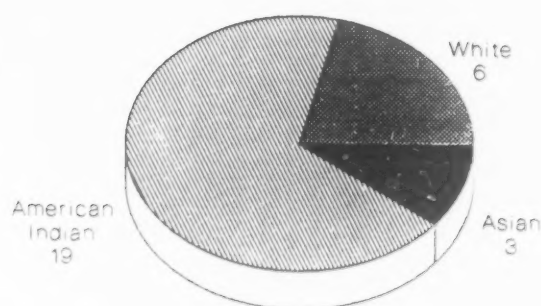
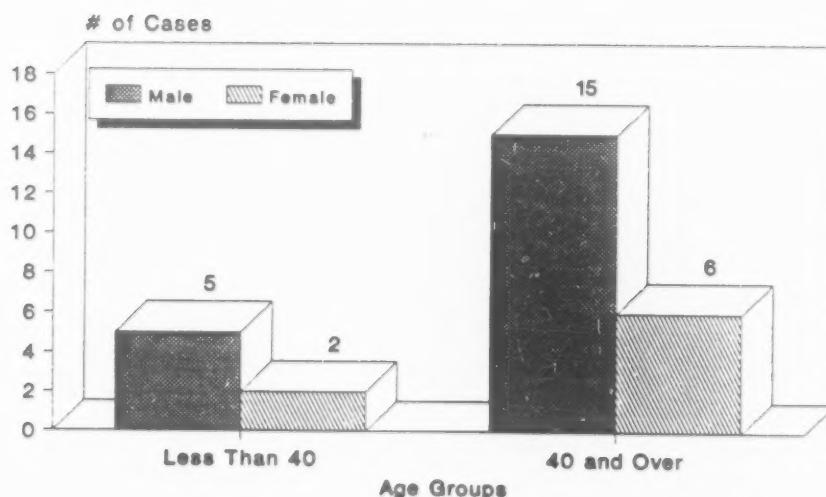


Figure 11
South Dakota Tuberculosis Cases
by Sex and Age, 1989



A matter of concern in South Dakota as well as at the national level is the occurrence of tuberculosis in young children (under five years of age). Each such case represents a failure to interrupt transmission of infection from a case of tuberculosis and a failure to prevent, through drug prophylaxis, the emergence of disease in such an infected child. In 1989 there was one new tuberculosis case among children in this age group.

AIDS/HIV

Acquired Immunodeficiency Syndrome (AIDS) is a disease caused by the Human Immunodeficiency Virus (HIV) that damages the immune system and destroys the body's ability to fight off illness. The syndrome was first described in 1981 and by the end of 1989, 117,781 cases nationally had been reported to the Centers for Disease Control in Atlanta, Georgia.

AIDS has been a reportable disease in South Dakota since 1985, and HIV infection has been reportable since 1988. Figures 12 and 13 reflect AIDS and HIV infection incidence information available since 1985.

Figure 12
South Dakota AIDS Cases
Trend in Number of New AIDS Cases

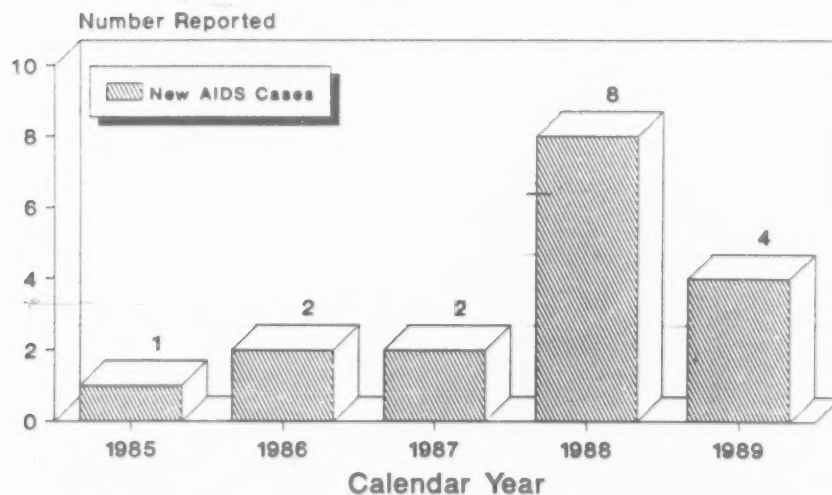
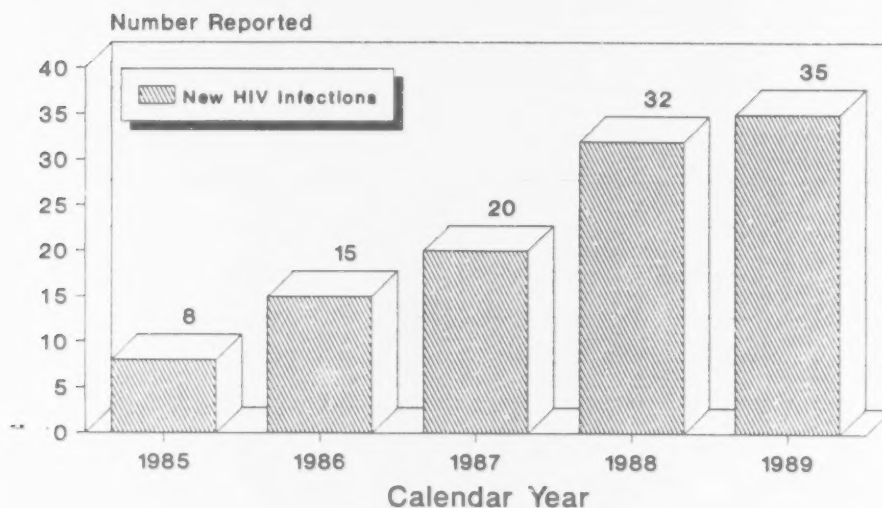


Figure 13
South Dakota HIV Infections
Trend in Number of New HIV Infections



AIDS first appeared in the United States in the male homosexual and intravenous drug user communities and continues to be concentrated in high risk persons. Tables 29 and 30 illustrate the distribution of cumulative AIDS cases and HIV infections by transmission category in South Dakota.

Table 29

South Dakota AIDS Cases Transmission Category
1985-1989 Cumulative

Transmission Catagories	Male		Female		Total	
	Number	Percent	Number	Percent	Number	Percent
Homosexual/Bisexual	10	58	-	-	10	58
I.V. Drug Abuse	-	-	1	6	1	6
Homosexual/Bi & I.V.Drugs	2	12	-	-	2	12
Hemophilia	2	12	-	-	2	12
Hetrosexual	-	-	-	-	-	-
Transfusion, Blood	-	-	-	-	-	-
Child of HIV+ Mother	-	-	-	-	-	-
Undetermined (denies risk)	2	12	-	-	2	12
Total	16	94	1	6	17	100

Table 30

South Dakota HIV Cases Transmission Category
1985-1989 Cumulative

Transmission Catagories	Male		Female		Total	
	Number	Percent	Number	Percent	Number	Percent
Homosexual/Bisexual	50	51	-	-	50	51
I.V. Drug Abuse	7	7	7	7	14	14
Homosexual/Bi & I.V.Drugs	6	6	-	-	6	6
Hemophilia	15	16	-	-	15	16
Hetrosexual	5	5	3	3	8	8
Transfusion, Blood	1	1	-	-	1	1
Child of HIV+ Mother	-	-	2	2	2	2
Undetermined (denies risk)	2	2	-	-	2	2
Total	86	88	12	12	98	100

NOTE: 12 HIV(+)s reported prior to 1988 were not investigated-transmission categories are unknown.

TABLE 31
SELECTED MORBIDITY REPORT, SOUTH DAKOTA, 1989

SELECTED NOTIFIABLE DISEASE	1989	5 YEAR MEDIAN
VACCINE PREVENTABLE		
Diphtheria	0	0
Tetanus	0	0
Pertussis	4	8
Poliomyelitis	0	0
Measles	0	0
Mumps	0	1
Rubella	0	0
BLOOD-BORNE/SEXUALLY TRANSMITTED DISEASES		
AIDS	4	2
HIV Infection	33	NA
Hepatitis B	10	19
Chlamydia	2264	NA
Gonorrhea	280	815
Syphilis Infections	4	13
TUBERCULOSIS		
Class III - Disease		
Pulmonary	21	21
Non-pulmonary	7	10
Class II - Infection	653	641
INVASIVE BACTERIAL		
Haemophilus influenzae		
Meningitis	16	35
Infection	54	NA
Neisseria meningitidis		
Meningitis	6	4
Septicemia	3	2
ENTERIC DISEASES		
Campylobacteriosis	55	63
Giardiasis	219	261
Salmonellosis	112	106
Shigellosis	363	87
Hepatitis A	27	171
VECTORBORNE DISEASE		
Rocky Mt. Spotted Fever	5	4
Encephalitis	0	0
Tularemia	5	9
Animal Rabies	125	218
OTHER		
Aseptic Meningitis	14	26
Legionellosis	2	14
Other Viral Encephalitis	5	2

Technical Notes

TECHNICAL NOTES

A. SOURCES OF DATA

Vital Events

Birth and death certificates, reports of fetal deaths, and induced abortion reports were the source documents for data on vital events of South Dakota during the 1989 calendar year. A copy of each of these types of certificates is included in the Samples of Data Collection Section. Marriage and divorce data were compiled from transcripts which were received from each county. Copies of a marriage certificate and of the record of divorce are also included in the sample of Data Collection section.

The cut-off date for 1989 data in this report was April 15, 1990. Any data pertaining to a 1989 event for which a certificate was filed after April 15, 1990 were not included in this report. The number of records received after that date was so small that in most instances, it is of little significance for the purpose of analysis.

Events relating to South Dakota residents which occurred in another state were included in this report. The inclusion of these data are made possible by an agreement among all registration areas in the United States for resident exchange of copies of certificates.

Birth and fetal death records are the responsibility of the person in attendance, however, the records are usually completed by medical records personnel who are not necessarily present at the delivery. Death records are the responsibility of the funeral director. These records are seldom completed by hospital personnel or physicians, although the medical certification is completed by a physician or coroner.

United States data were obtained from publications produced by the Department of Health and Human Services, Public Health Services, Centers for Disease Control, National Centers for Health Statistics, Hyattsville, Maryland.

Population

The July 1, 1988, population estimates were used to develop the rates in this publication. The July 1, 1988, state and county population estimates used in this publication were prepared through the Federal State Cooperative Program For Local Population Estimates. The county estimates were based on an average of a regression (ratio-correlation) method and an administrative records method.

The regression method uses a multiple regression equation to relate changes in the distribution of selected data to changes in the distribution of population among counties. The selected data used in the regression method are: federal income tax returns, resident births, resident deaths, and registered motor vehicles. The administrative records method is a component method that incorporates various subsets of data to determine population estimates. The subsets include: individual federal income tax returns to measure the net intercounty migration of the non-group quarters populations under 65 years old; reported resident births and deaths to estimate net natural changes; and data on Medicare enrollees to estimate the population 65 years of age and over. This method uses additional population data, such as, inmates of

institutions, college students in dormitories, military personnel living in barracks, immigration from abroad and net movement between the military and civilian population. The population estimates were developed by averaging estimates from the regression and administrative records methods and controlling estimates to the corresponding state estimates.

B. DATA DELIMITATIONS

Quality

The quality of data presented in this report is directly related to the completeness and accuracy of the information contained on the certificates.

Medical Certification

Causes of death on death certificates are coded according to the ninth revision of the International Classification of Disease (ICD). This classification is adopted by the World Health Organization and is used throughout the world for selecting the underlying cause of death and classifying the cause.

Race

The race reported on the vital records reflects the opinion of the informant and does not follow any prescribed rules for the reporting of race. This report shows tabulations for white, Indian, and other. Persons classified as other are few in South Dakota and tabulations reflecting these events are not statistically significant.

Birth data were tabulated using the race of the mother. No attempt is made to determine the race of the child from the race shown for the father and the mother.

C. GEOGRAPHIC ALLOCATION

In South Dakota, registration of vital events is classified geographically in two ways. The first way is by place of occurrence, i.e., the actual state and county in which the birth or death took place. The second, and more customary way is by place of residence, i.e., the state or county stated to be the usual residence of the decedent in the case of deaths or of the mother in the case of a newborn.

Fetal deaths and infant deaths, in cases where the child was never discharged from the hospital, are classified to the residence of the mother.

Occurrence statistics have administrative value and statistical significance, especially when calculating accident statistics. Residence statistics are useful in determining health indices for planning and evaluation purposes. The statistics provided in this report are residence data unless otherwise stated.

Allocation of vital events by place of residence is sometimes difficult, because classification depends entirely on the statement of the usual place of residence furnished by the informant at the time the original certificate is

completed. For various reasons, this statement may be incorrect or incomplete. For example, mailing addresses very often differ from the actual geographic residence.

D. DEFINITIONS

Abortion - The termination of human pregnancy with an intention other than to produce a live birth or to remove a dead fetus.

Age-Adjusted Death Rate (Direct Method) - Age-specific death rates for a selected population are applied to a standard population in order to calculate what rate would be expected if the selected population had the same age distribution as the standard. The total of expected deaths divided by the total of the standard population and multiplied by 1,000 (or 100,000 for cause-specific rates) yields the age-adjusted death rate per 1,000 or 100,000. (It is important to use the same standard population in the computation of each age-adjusted rate to achieve comparability. Age-adjusted death rates should never be compared with any other types of death rate or be used as absolute measurements of mortality.)

Age-Specific Birth Rate - Number of live births to women in specific age group per 1,000 female population in that age group.

Age-Specific Death Rate - Number of deaths in a specific age group per 100,000 population in that age group.

Birth Weight - The first weight of the fetus or newborn obtained after birth. This weight should be measured preferably within the first hour of delivery before significant postnatal weight loss has occurred.

Crude Birth Rate - The number of resident live births divided by the total resident population X 1,000.

Crude Death Rate - The number of resident deaths divided by the total resident population X 1,000.

Cause Specific Death Rate - The number of resident deaths due to a specific cause divided by the total resident population X 1,000.

Fetal Death - Death prior to the complete expulsion or extraction from its mother of a product of human conception irrespective of the duration of pregnancy, as indicated by the fact that after such expulsion or extraction the fetus does not show evidence of life. (South Dakota requires the reporting of any fetus weighing over 500 grams).

Fetal Death Rate - The number of fetal deaths divided by the total number of live births and fetal deaths X 1,000.

Infant Death - Death of a live born infant less than one year (365 days) of age. Infant deaths equal the sum of neonatal plus post neonatal deaths.

Infant Death Rate - The number of infant deaths divided by the total number of live births X 1,000.

Live Birth - The complete expulsion or extraction from its mother of a product of human conception, irrespective of the duration of pregnancy, which, after separation, shows evidence of life.

Low Birth Weight - A birth weight under 2500 grams or 5 pounds, 9 ounces.

Mean - The arithmetic average of a set of values or the sum of all the values divided by the number of values in the group.

Median - The value or number that divides a population into two equal halves. The value that falls exactly in the middle of the entire range of values ranked in order from low to high such that 50% of the values fall above it and 50% fall below it. If the number of values is even, a value halfway between the two values nearest the middle is used.

Mode - The most frequently occurring value in a distribution.

Neonatal Death Rate - (Neonatal Death = Death occurring to infants 1-27 days old). The number of neonatal deaths divided by the total number of live births X 1,000.

Occurrence, Place of - Data allocated by place where the event occurred, irrespective of the person's place of residence.

Postneonatal Death Rate - (Postneonatal Death = Death occurring to infants 28 days to 1 year of age). The number of postneonatal deaths divided by the total number of live births X 1,000.

Perinatal Period - Completion of 28 weeks of gestation and variously defined as ending 1 to 4 weeks after birth.

Residence, Place of - Data allocated by place of residence, irrespective of where the event occurred.

Appendix

APPENDIX

BIRTH WEIGHT IN GRAMS

In order to provide data comparable to that published for the United States and other countries, birth weight is reported in grams for this report. The equivalents of the gram intervals in pounds and ounces are as follows:

499 grams or less	=	1 lb.	1 oz. or less	
500 - 999 grams	=	1 lb.	2 ozs. - 2 lbs.	3 ozs.
1,000 - 1,499 grams	=	2 lbs.	4 ozs. - 3 lbs.	4 ozs.
1,500 - 1,999 grams	=	3 lbs.	5 ozs. - 4 lbs.	6 ozs.
2,000 - 2,499 grams	=	4 lbs.	7 ozs. - 5 lbs.	8 ozs.
2,500 - 2,999 grams	=	5 lbs.	9 ozs. - 6 lbs.	9 ozs.
3,000 - 3,499 grams	=	6 lbs.	10 ozs. - 7 lbs.	11 ozs.
3,500 - 3,999 grams	=	7 lbs.	12 ozs. - 8 lbs.	12 ozs.
4,000 - 4,499 grams	=	8 lbs.	13 ozs. - 9 lbs.	14 ozs.
4,500 - 4,999 grams	=	9 lbs.	15 ozs. - 11 lbs.	0 ozs.
5,000 grams or more	=	11 lbs.	1 oz. or more	

RATES

Absolute counts of births and deaths do not readily lend themselves to analysis and comparison between years and various geographic areas because of population differences. These demographic differences include total number, age and sex distributions, and ethnic or racial differentials. In order to assess the health status of a particular population at a specified time, the absolute number of events is converted to a relative number such as probability of living or dying, a rate, a ratio, or an index. This conversion is made by relating the crude number of events to the living population at risk in a particular area at a specified time.

1. Reliability of Rates:

Precautions should always be taken when comparing any rates on vital events, especially crude rates. Both the size of the numbers and the characteristics of the population are important indicators of a rate's actual value.

All statistics are subject to chance variation. Rates based on an unusually small or large number of events over a specified period of time or for a sparsely populated geographic area should be particular caution and concern.

As an example of this problem, let us look at infant deaths as reported in 1987 and 1988 for residents of Meade County. There were 3 infant deaths in Meade County in 1987 which gave the County an infant mortality rate of 8.7 per 1,000 resident live births. However, in 1988, there were 5 infant deaths in Meade County. This resulted in an infant mortality rate of 15.1, an increase of over 80 percent. This is the chance result of a few deaths having enormous significance when applied to the relatively small number of births in Meade County. Any statement regarding the unusually high infant death rate in Meade County or the incredible increase in rates between 1987 and 1988 could be quite misleading. When small numbers of events or populations are evident in calculating/studying rates, multiple year rates (usually 5 or 10 year summary rates) will often provide a much better framework for the measurement of an outcome. For instance, if you calculate the running ten-year average infant

death rates for Meade County which end with the years 1987 and 1988, you will get an infant mortality rate of 8.1 for the period 1978-1987 and a rate of 8.4 for the period of 1979-1988. If these rates are compared to South Dakota's crude infant mortality rate, it can be seen that Meade County has a lower infant mortality rate than the State. In addition, the increase in rates from 8.1 to 8.4 (3.7 percent) is a much more realistic indicator of what is actually occurring in Meade County.

There are many characteristics of a population that can also render a crude rate of little use. Any unique demographic factors such as those related to age, sex, or race are not accounted for in crude rates. Since mortality varies greatly by age, crude death comparisons between the United States and South Dakota could be very misleading. Age adjusted and specific rates offer a more refined measurement with which to compare vital event experiences over geographic areas or time periods.

Table A-1

SOUTH DAKOTA RESIDENT VITAL STATISTICS BY COUNTY, 1989

RESIDENCE	BIRTHS		DEATHS		MARRIAGES		DIVORCES	
	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE	NUMBER	RATE
SOUTH DAKOTA	11,072	15.5	6,534	9.2	7,108	10.0	2,624	3.7
COUNTY								
AURORA	33	9.6	32	9.3	28	8.2	6	1.8
BEADLE	232	12.7	207	11.3	156	8.5	65	3.5
BENNETT	74	21.8	47	13.9	20	5.9	7	2.1
BON HOMME	89	13.1	94	13.8	43	6.3	20	2.9
BROOKINGS	290	12.0	194	8.0	210	8.7	90	3.7
BROWN	516	14.0	299	8.1	335	9.1	127	3.4
BRULE	80	15.4	54	10.4	62	11.9	11	2.1
BUFFALO	52	28.9	28	15.6	7	3.9	-	0.0
BUTTE	125	15.2	103	12.6	85	10.4	45	5.5
CAMPBELL	22	10.1	34	15.6	14	6.4	7	3.2
CHARLES MIX	168	18.0	114	12.2	77	8.3	12	1.3
CLARK	49	10.4	62	13.2	32	6.8	14	3.0
CLAY	160	12.5	88	6.8	84	6.5	56	4.4
CODDINGTON	317	13.9	214	9.4	372	16.4	90	4.0
CORSON	88	18.4	25	5.2	24	5.0	3	0.6
CUSTER	77	11.3	70	10.3	92	13.6	19	2.8
DAVISON	256	14.6	203	11.6	174	9.9	114	6.5
DAY	101	13.3	111	14.6	57	7.5	21	2.8
DEUEL	55	11.2	55	11.2	47	9.6	11	2.2
DEWEY	161	29.9	46	8.5	34	6.3	3	0.6
DOUGLAS	61	15.7	49	12.6	40	10.3	1	0.3
EDMUNDS	57	11.9	66	13.8	33	6.9	7	1.5
FALL RIVER	74	9.7	122	16.0	113	14.8	38	5.0
FAULK	41	13.6	41	13.6	16	5.3	4	1.3
GRANT	113	12.4	80	8.8	130	14.2	39	4.3
GREGORY	63	11.3	84	15.0	29	5.2	13	2.3
HAAKON	42	15.7	26	9.7	17	6.4	6	2.2
HAMLIN	72	13.9	86	16.6	40	7.7	6	1.2
HAND	60	13.1	51	11.1	30	6.5	8	1.7
HANSON	37	11.3	27	8.2	18	5.5	4	1.2
HARDING	30	17.8	12	7.1	9	5.3	1	0.6
HUGHES	256	16.8	112	7.4	187	12.3	64	4.2
HUTCHINSON	105	12.3	125	14.7	58	6.8	22	2.6
HYDE	17	9.5	28	15.6	11	6.1	6	0.3
JACKSON	55	16.6	20	6.1	13	3.9	4	1.2
JERAULD	35	12.6	28	10.1	16	5.8	3	1.1
JONES	13	9.4	9	6.5	9	6.5	4	2.9
KINGSBURY	58	9.2	75	12.0	38	6.1	17	2.7
LAKE	134	12.9	95	9.1	59	5.7	31	3.0
LAWRENCE	262	13.3	190	9.6	250	12.7	98	5.0
LINCOLN	205	13.7	136	9.1	105	7.0	50	3.4
LYMAN	74	20.0	38	10.3	20	5.4	5	1.4
MCCOOK	72	12.1	70	11.7	34	5.7	18	3.0
MCPHERSON	36	10.1	46	12.9	22	6.2	2	0.6
MARSHALL	66	13.2	60	12.0	47	9.4	5	1.0
MEADE	332	14.0	120	5.1	170	7.2	79	3.3
MELLETTE	44	19.2	18	7.9	29	12.7	3	1.3
MINER	42	12.5	51	15.1	19	5.6	8	2.4
MINNEHAHA	2,008	16.0	861	6.9	1,341	10.7	579	4.6
MOODY	96	14.3	84	12.5	59	8.8	18	2.8
PENNINGTON	1,727	21.1	505	6.2	1,029	12.5	494	8.0
PERKINS	39	8.5	53	11.6	31	6.8	9	2.0
POTTER	41	11.4	40	11.2	31	8.7	10	2.8
ROBERTS	165	15.3	120	11.1	198	18.3	18	1.7
SANBORN	42	14.5	30	10.3	17	5.9	5	1.7
SHANNON	383	32.7	106	9.1	9	0.8	-	0.0
SPIRK	102	11.9	98	11.4	54	6.3	30	3.5
STANLEY	42	15.6	23	8.5	14	5.2	17	6.3
SULLY	15	8.4	8	4.5	8	4.5	5	2.8
TODD	286	37.2	76	9.9	16	2.1	5	0.7
TRIPP	101	14.4	85	12.2	66	9.4	17	2.4
TURNER	99	11.4	118	13.6	61	7.0	17	2.0
UNION	126	11.9	104	9.8	368	34.8	42	4.0
WALWORTH	68	10.3	90	13.7	51	7.8	15	2.3
YANKTON	266	14.1	169	8.9	231	12.2	75	4.0
ZIEBACH	65	27.1	19	7.9	9	3.7	1	0.4

NOTE: Births, deaths, and fetal deaths are by county of residence, marriages and divorces are by county of occurrence. Rates per 1,000 population.

Source: Center for Health Policy and Statistics, South Dakota Department of Health.

Table A-2

South Dakota Births and Infant Deaths by Mother's Race and County of Residence, 1980-1989

County	Births				Infant Deaths							
	White	Native American	Other	Total	White	Native American	Other	Total	White	Native American	Other	Total
	#	#	#	#	#	Rate	#	Rate	#	Rate	#	Rate
Aurora	452	1	0	453	4	8.8	0	0.0	0	0.0	4	8.8
Beadle	2,729	32	15	2,776	18	6.6	0	0.0	0	0.0	18	6.5
Bennett	304	409	2	715	4	13.2	9	22.0	0	0.0	13	18.2
Bon Homme	986	19	6	1,011	12	12.2	1	52.6	0	0.0	13	12.9
Brookings	3,503	29	57	3,589	25	7.1	0	0.0	1	17.5	26	7.2
Brown	5,435	264	22	5,721	42	7.7	7	26.5	0	0.0	49	8.6
Brule	836	73	6	915	8	9.6	2	27.4	1	166.7	11	12.0
Buffalo	85	476	1	562	2	23.5	13	27.3	0	0.0	15	26.7
Butte	1,280	16	2	1,298	14	10.9	0	0.0	0	0.0	14	10.8
Campbell	309	1	1	311	1	3.2	0	0.0	0	0.0	1	3.2
Charles Mix	1,209	674	1	1,884	9	7.4	12	17.8	0	0.0	21	11.1
Clark	757	1	0	758	7	9.2	0	0.0	0	0.0	7	9.2
Clay	1,646	73	16	1,735	8	4.9	0	0.0	1	62.5	9	5.2
Codington	3,616	76	11	3,703	31	8.6	0	0.0	0	0.0	31	8.4
Corson	376	786	2	1,164	4	10.6	14	17.8	0	0.0	18	15.5
Custer	881	26	3	910	7	7.9	1	38.5	0	0.0	8	8.8
Davison	2,954	73	12	3,039	25	8.5	2	27.4	0	0.0	27	8.9
Day	967	184	2	1,153	2	2.1	3	16.3	0	0.0	5	4.3
Deuel	684	1	1	686	5	7.3	0	0.0	0	0.0	5	7.3
Dewey	412	1,195	3	1,610	5	12.1	22	18.4	0	0.0	27	16.8
Douglas	663	2	0	665	6	9.0	0	0.0	0	0.0	6	9.0
Edmunds	686	0	1	687	4	5.8	0	0.0	0	0.0	4	5.8
Fall River	1,039	98	3	1,140	9	8.7	2	20.4	1	333.3	12	10.5
Faulk	512	0	0	512	4	7.8	0	0.0	0	0.0	4	7.8
Grant	1,444	10	5	1,459	18	12.5	0	0.0	0	0.0	18	12.3
Gregory	839	99	1	939	5	6.0	4	40.4	0	0.0	9	9.6
Haakon	513	13	3	529	4	7.8	0	0.0	0	0.0	4	7.6
Hamlin	826	3	1	830	10	12.1	0	0.0	0	0.0	10	12.0
Hand	647	3	1	651	6	9.3	0	0.0	0	0.0	6	9.2
Hanson	447	1	0	448	2	4.5	0	0.0	0	0.0	2	4.5
Harding	315	8	0	323	2	6.3	0	0.0	0	0.0	2	6.2
Hughes	2,181	321	14	2,516	29	13.3	5	15.6	0	0.0	34	13.5
Hutchinson	1,225	1	0	1,226	6	4.9	0	0.0	0	0.0	6	4.9
Hyde	237	11	1	249	2	8.4	0	0.0	0	0.0	2	8.0
Jackson	291	382	1	674	2	6.9	11	28.8	0	0.0	13	19.3
Jerauld	382	0	2	384	1	2.6	0	0.0	0	0.0	1	2.6
Jones	245	9	1	255	1	4.1	0	0.0	0	0.0	1	3.9
Kingsbury	929	0	8	937	10	10.8	0	0.0	1	125.0	11	11.7
Lake	1,590	6	6	1,602	14	8.8	0	0.0	0	0.0	14	8.7
Lawrence	2,927	79	10	3,016	35	12.0	2	25.3	0	0.0	37	12.3
Lincoln	2,300	8	6	2,314	9	3.9	0	0.0	0	0.0	9	3.9
Lyman	416	357	1	774	2	4.8	9	25.2	0	0.0	11	14.2
McCook	901	2	2	905	6	6.7	0	0.0	0	0.0	6	6.6
McPherson	446	0	0	446	4	9.0	0	0.0	0	0.0	4	9.0
Marshall	661	47	0	708	6	9.1	1	21.3	0	0.0	7	9.9
Meade	3,595	99	114	3,808	28	7.8	1	10.1	1	8.8	30	7.9
Mellette	186	317	0	503	0	0.0	3	9.5	0	0.0	3	6.0
Miner	498	1	0	499	2	4.0	0	0.0	0	0.0	2	4.0
Minnehaha	19,174	395	243	19,812	174	9.1	5	12.7	3	12.3	182	9.2
Moody	1,006	112	6	1,124	3	3.0	2	17.9	0	0.0	5	4.4
Pennington	13,908	1,912	702	16,522	160	11.5	33	17.3	6	8.5	199	12.0
Perkins	572	12	0	584	5	8.7	0	0.0	0	0.0	5	8.6
Potter	525	16	2	543	5	9.5	0	0.0	0	0.0	5	9.2
Roberts	1,121	784	3	1,908	7	6.2	16	20.4	0	0.0	23	12.1
Sanborn	512	0	0	512	3	5.9	0	0.0	0	0.0	3	5.9
Shannon	158	3,690	7	3,855	0	0.0	108	29.3	0	0.0	108	28.0
Spink	1,291	5	5	1,299	9	7.0	0	0.0	0	0.0	9	6.9
Stanley	428	46	0	474	4	9.3	0	0.0	0	0.0	4	8.4
Sully	287	0	1	288	1	3.5	0	0.0	0	0.0	1	3.5
Todd	286	2,280	3	2,569	0	0.0	64	28.1	0	0.0	64	24.9
Tripp	977	288	2	1,267	5	5.1	6	20.8	0	0.0	11	8.7
Turner	1,193	5	2	1,200	8	6.7	0	0.0	0	0.0	8	6.7
Union	1,567	6	11	1,584	10	6.4	0	0.0	0	0.0	10	6.3
Walworth	801	175	1	977	5	6.2	4	22.9	0	0.0	9	9.2
Yankton	3,004	80	15	3,099	37	12.3	0	0.0	0	0.0	37	11.9
Ziebach	150	503	1	654	4	26.7	6	11.9	0	0.0	10	15.9
Total	103,322	16,593	1,348	121,263	900	8.7	368	22.2	15	11.1	1,283	10.6

Source: Center for Health Policy and Statistics, South Dakota Department of Health.

NOTE: Rates are per 1,000 resident live birth.